ORDER NO. AD9104T05C2

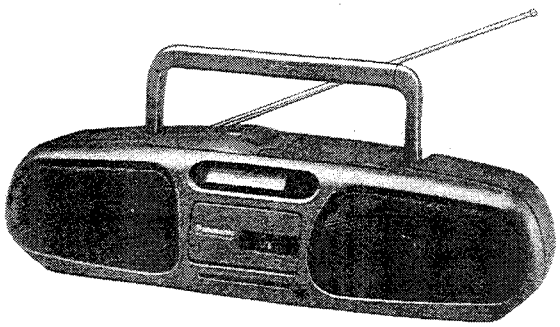
Service Manual

Portable Stereo CD System

Radio Cassette

RX-DS45

COMPACT disc DIGITAL AUDIO



Color

(K)	Black Type

Areas

Country Code	Areas	Color
(EB)	Great Britain	(K)
(EG)	Continental Europe and F.R. Germany	

TAPE DECK: RX-FD55 MECHANISM SERIES (AR300)
TRAVERSE DECK: RX-DT55 MECHANISM SERIES (S0DD110)

■ SPECIFICATIONS

General:

Power Requirement:	AC; 230~240 V, 50 Hz Battery; 15 V (10 R20/LR20, UM-1 batteries) Memory Back-up for Computer/Clock; 6V (4 R6/LR6, UM-3 batteries)
Power Consumption:	46 W (AC only)
Power Output:	22.5 W×2...PMPO
Speaker:	Woofer; 10 cm×2 PM Dynamic speaker (2.7Ω) Tweeter; 8 cm×2 PM Dynamic speaker (8Ω)
Inputs:	MIX MIC; 4.5 mV/200~600Ω, Ø3.5 AUX; 200 mV/47 kΩ
Output:	HEADPHONES; 32Ω, Ø3.5
Dimensions:	648 (W)×175 (H)×250 (D) mm
Weight:	5.8 kg without batteries

Disc Player Section:

Sampling Frequency:	44.1 kHz
D-A Conversion:	16-bit linear
Light Source:	Semiconductor laser (wavelength 780 nm)
No. of Channels:	2 channels, stereo
Frequency Range:	20~20,000 Hz (+1/−2 dB)
Dynamic Range:	95 dB
S/N Ratio:	100 dB
Wow and Flutter:	below measurable limit

Radio Section:

Radio Frequency Range:	FM; 87.5~108 MHz LW; 144~288 kHz MW; 522~1611 kHz
Intermediate Frequency:	FM; 10.7 MHz AM; 459 kHz
Sensitivity:	FM; 5 µV/50 mW output (−3 dB Limit Sens) LW; 100 µV/m/50 mW output MW; 60 µV/m/50 mW output

Tape Deck Section:

Frequency Range:	30~16,000 Hz (with normal tape)
Recording System:	AC bias (67 kHz), AC erase
Tape Speed:	4.8 cm/s
Monitor System:	Variable sound monitor
Track System:	4-track 2-channel stereo recording and playback

Notes:

1. Weights and dimensions shown are approximate.
2. Design and specifications are subject to change without notice.

Panasonic

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CAUTION:
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

■ PRECAUTION OF LASER DIODE

CAUTION: This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pick up lens.

Wave length: 780 nm
Maximum output radiation power from pick up: 100 µW/VDE

Laser radiation from the pick up lens is safety level, but be sure the followings:

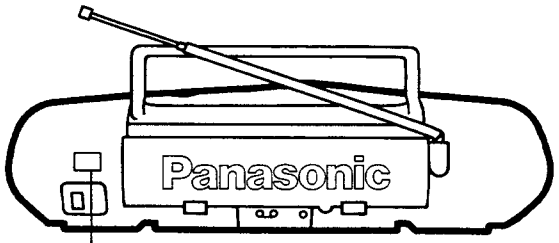
1. Do not disassemble the optical pick up unit, since radiation from exposed laserd diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

ACHTUNG: Dieses produkt enthält eine laserdiode. Im eingeschalteten zustand wird unsichtbare laserstrahlung von der lasereinheit abgestrahlt.

Wellenlänge: 780 nm
Maximale strehlungsleistung der lasereinheit: 100 µW/VDE

Die strahlung an der lasereinheit ist ungefährlich, wenn folgende punkte beachtet werden:

1. Die lasereinheit nicht zerlegen, da die strahlung an der freigelegten laserdiode gefährlich ist.
2. Den werksseitig justierten einstellregler der lasereinreit nicht verstellen.
3. Nicht mit optischen instrumenten in die fokussierlinse blicken.
4. Nicht über längere zeit in die fokussierlinse blicken.



DANGER-Invisible laser radiation when open and interlock defeated. AVOID DIRECT EXPOSURE TO BEAM.
(Inside of product)

VORSICHT-Unsichtbare Laserstrahlung, wenn Abdeckung geöffnet und Sicherheitsverriegelung überbrückt. Nicht dem Strahl aussetzen.
(Im Inneren des Gerätes)

CLASS 1
LASER PRODUCT

LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT

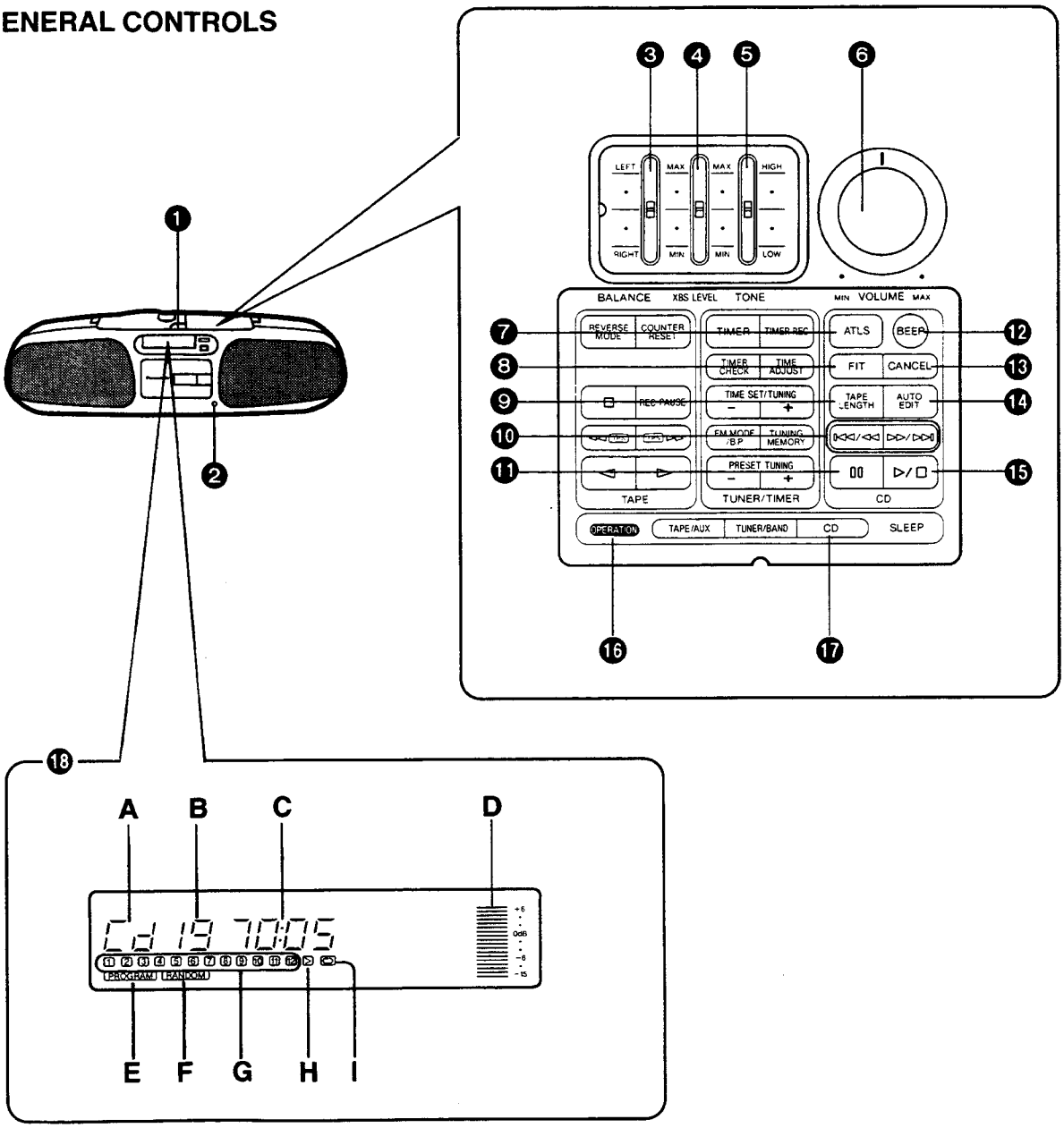
ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
(Indersiden at apparatet)

VARO! Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

VARNING! Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

■ LOCATION OF CONTROLS

•CD/GENERAL CONTROLS



❶ CD eject button (CD EJECT)

❷ Headphones jack (PHONES)
(∅3.5, 32Ω)

❸ Balance control (BALANCE)

❹ Extra bass system control (XBS LEVEL)

❺ Tone control (TONE)

❻ Volume control (VOLUME)

❼ Automatic tape level setting button (ATLS)

❽ Fit edit recording button (FIT)

❾ Tape length button (TAPE LENGTH)

❿ Skip/search buttons (⏮/◁◁ • ▷▷/⏭)

⓫ Pause button (⏸)

⓬ Beep sound button (BEEP)

⓭ Cancel button (CANCEL)

⓮ Auto edit recording button (AUTO EDIT)

⓯ Play/stop button (▷/□)

⓰ Operation switch (OPERATION)

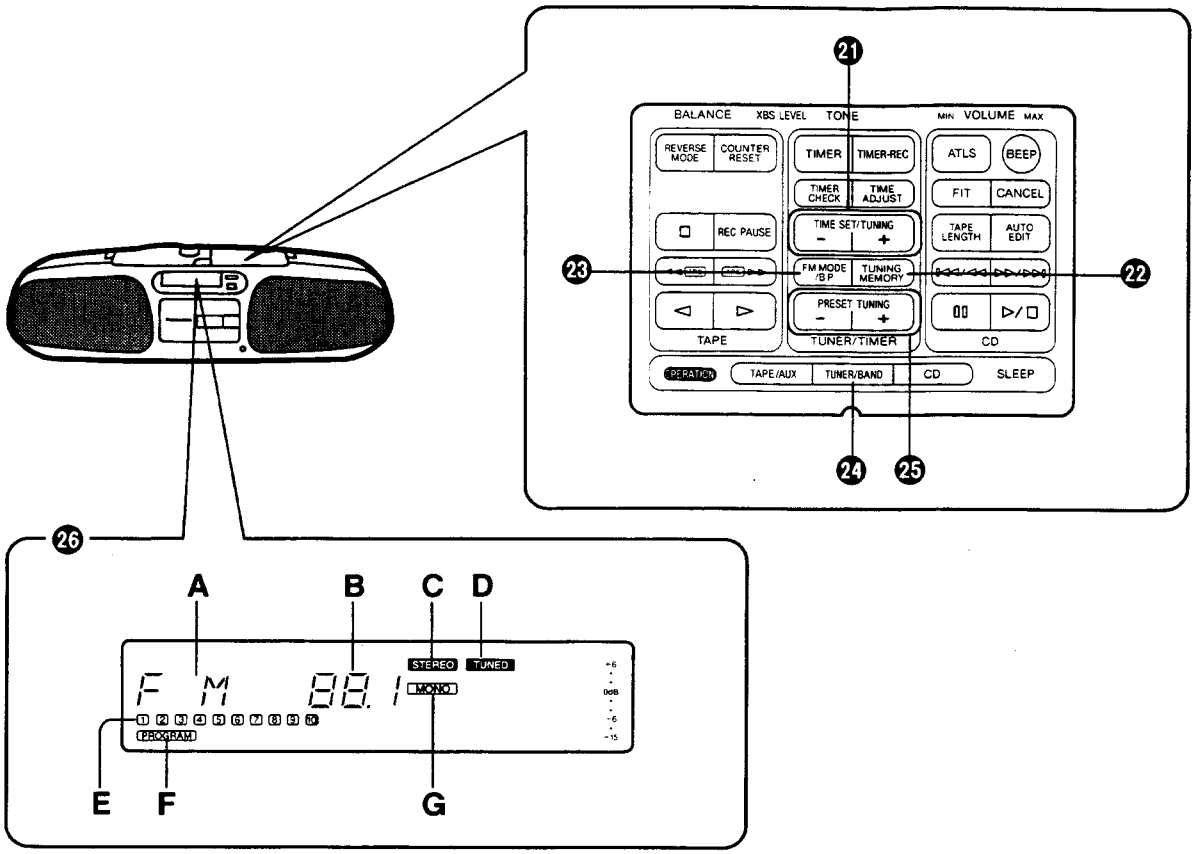
⓱ CD button (CD)

⓲ Display section
A: CD mode indicator (CD)
B: Track display
C: Playing time display
D: Level meter
E: Program indicator (PROGRAM)
F: Random indicator (RANDOM)
G: Music matrix
H: Over mark indicator (⊳)
I: Repeat indicator (↻)

⓳ Operation/Battery check/AC connection indicator (OPR-STDBY ⏻)

⓴ Remote control sensor

•TUNER CONTROLS



21 Tuning buttons (TIME SET/TUNING)

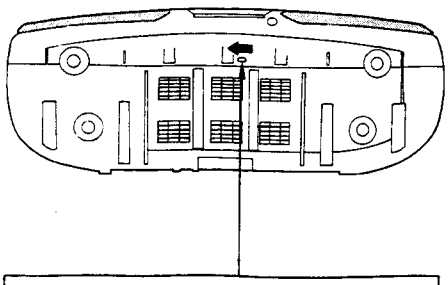
22 Tuning memory button (TUNING MEMORY)

23 FM mode/beat proof button (FM MODE/B.P)

24 Tuner/band select button (TUNER/BAND)

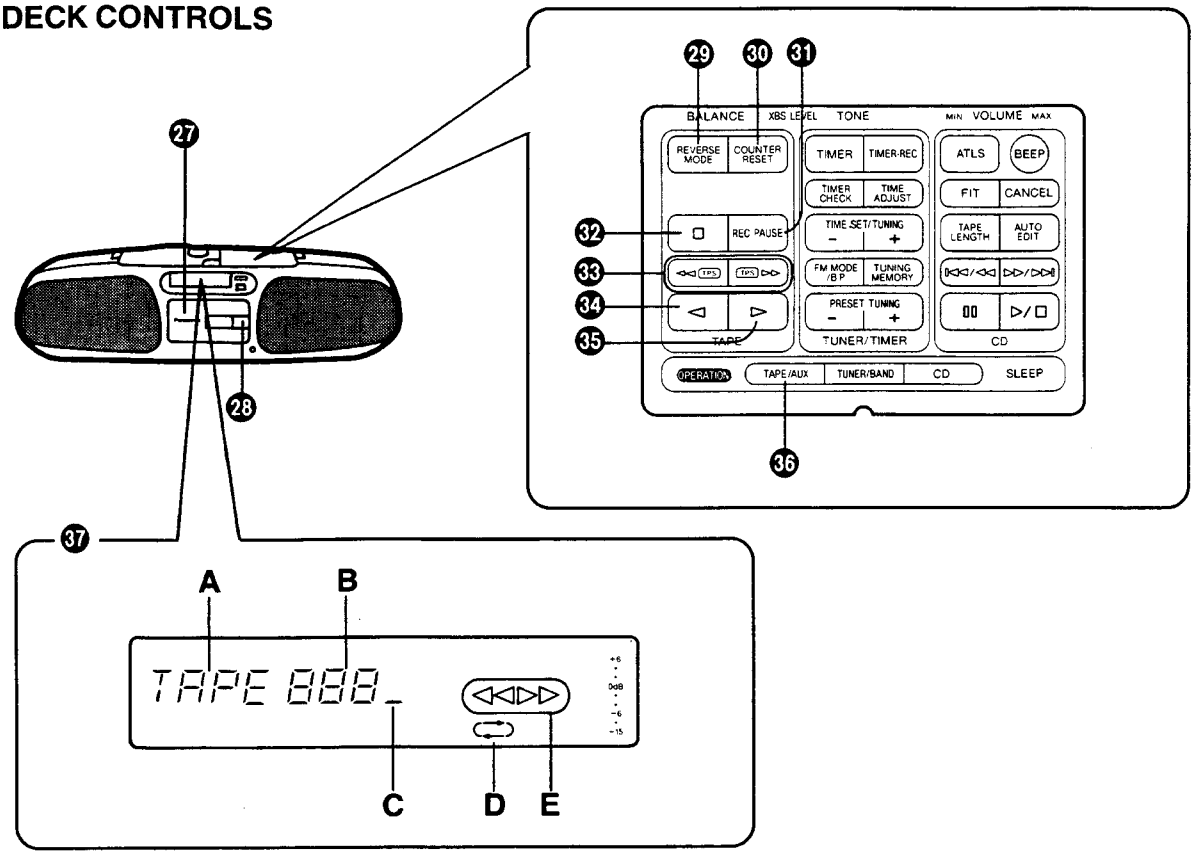
25 Preset tuning buttons (PRESET TUNING)

26 Display section
- **A: Band indicator (FM/MW/LW)**
- **B: Frequency display**
- **C: Stereo indicator (STEREO)**
- **D: Tuning indicator (TUNED)**
- **E: Preset channel displays**
- **F: Memory indicator (PROGRAM)**
- **G: FM mode indicator (MONO)**



When the tape is caught in the pinch roller, etc. Release the tape by tuning the pulley on the motor with the screwdriver in the direction of the arrow.

•DECK CONTROLS



㉗ Cassette compartment cover

㉘ Eject button (⏏ EJECT)

㉙ Reverse mode select button (REVERSE MODE)

㉚ Counter reset button (COUNTER RESET)

㉛ Rec-pause button (REC PAUSE)

㉜ Stop button (□)

㉝ Fast/tape program sensor button (◁◁ TPS ▷▷)

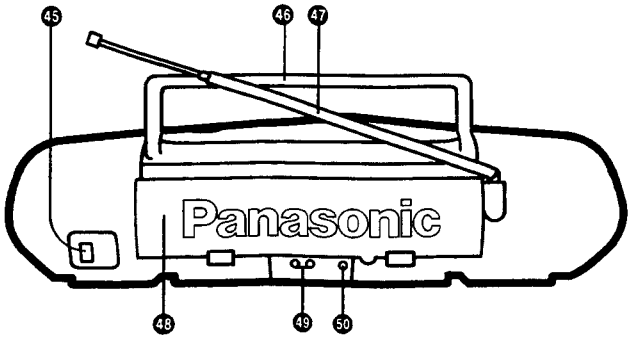
㉞ Reverse side playback button (▷)

㉟ Forward side playback button (◁)

㊱ TAPE/AUX button (TAPE/AUX)

㊲ Display section
- A: Tape mode indicator (TAPE)
- B: Tape counter
- C: Tape running indicator
- D: Reverse mode indicator (⊂⊃)
- E: Tape direction indicators (◁◁ ▷▷)

•REAR PANEL



㊺ AC socket (AC IN~)

㊻ Handle

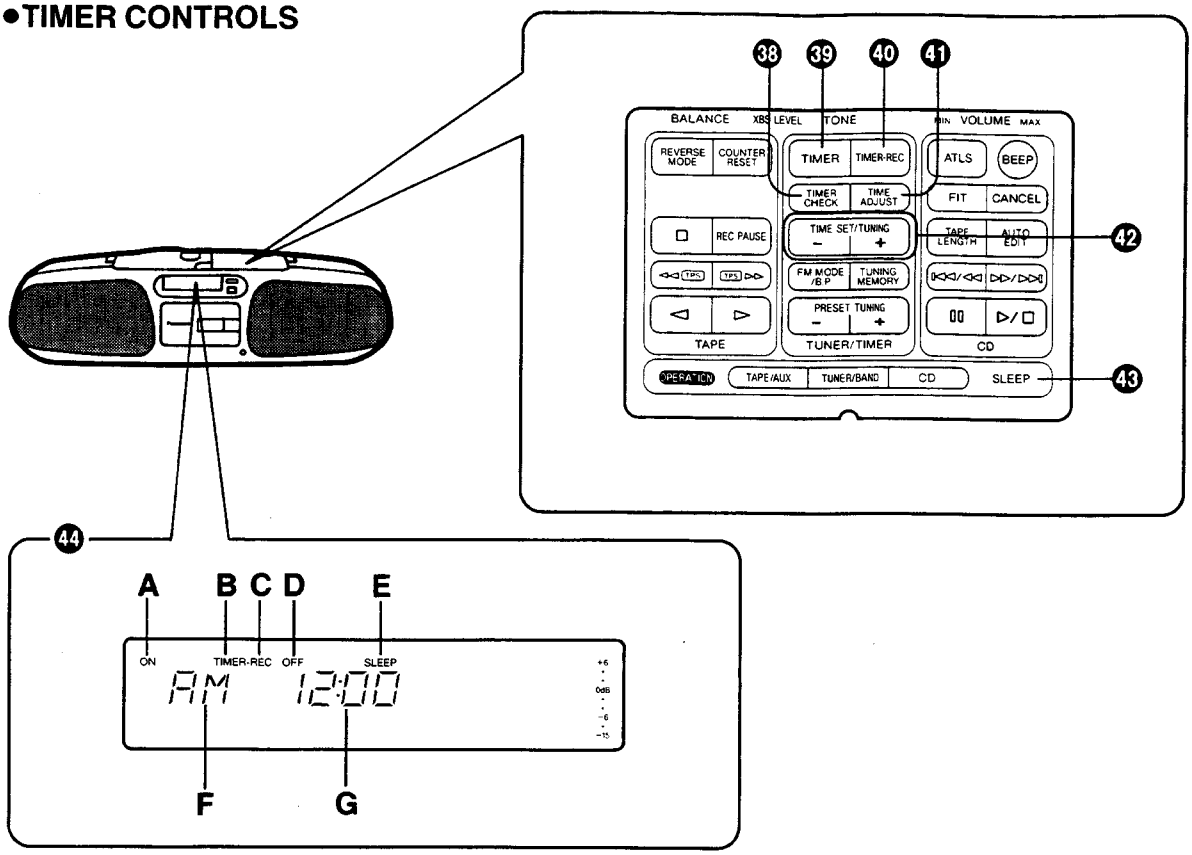
㊼ Telescopic antenna

㊽ Battery compartment cover

㊾ AUX input jack (AUX IN)
(200 mV/50 kΩ)

㊿ Mixing microphone jack (MIX MIC)
(4.5 mV/200~600Ω, Ø3.5)

•TIMER CONTROLS

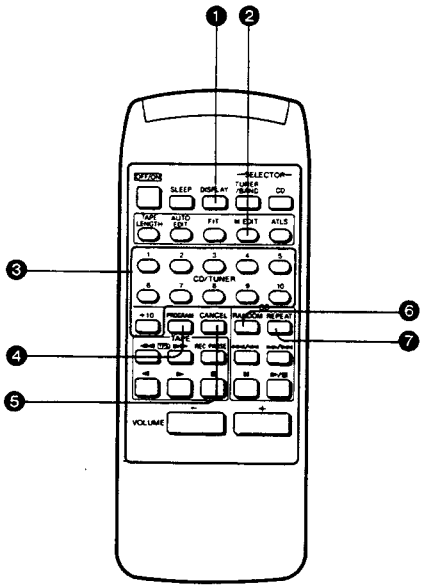


38 Timer check button (TIMER CHECK)
39 Timer play button (TIMER)
40 Timer recording button (TIMER-REC)
41 Time adjust button (TIME ADJUST)
42 Time set buttons (TIME SET/TUNING)
43 Sleep timer button (SLEEP)

44 Display section
- A: Timer ON indicator (ON)
- B: Timer indicator (TIMER)
- C: Timer recording indicator (TIMER-REC)
- D: Timer OFF indicator (OFF)
- E: Sleep timer indicator (SLEEP)
- F: AM–PM/play mode indicator
- G: Time display

•REMOTE CONTROLLER

- The receiving angle is approx. 60° (30° in each of the left, right directions).
- The maximum usable distance in about 7 m when the Remote Controller is aimed directly at the Remote Control Sensor.



1 Display Button (DISPLAY)
2 Manual Edit Recording Button (M.EDIT)
3 Numeric Buttons (1–10, +10)
4 Program Button (PROGRAM)
5 Cancel Button (CANCEL)
6 Random Button (RANDOM)
7 Repeat Button (REPEAT)

Note:
Please refer to "LOCATION OF CONTROLS" for the controls not described above.

■ HANDLING PRECAUTIONS FOR TRAVERSE DECK

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

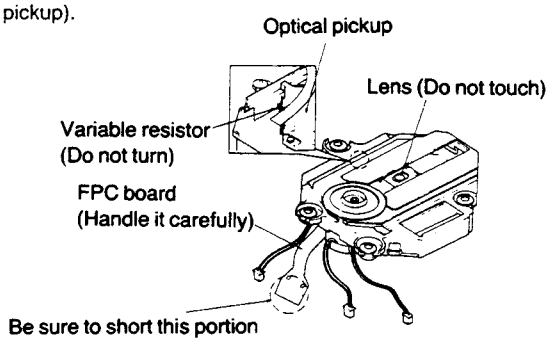
•Handling of traverse deck (optical pickup)

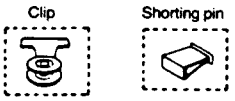
1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an anti-static shorting pin is inserted into the flexible board (FPC board). When removing or connecting the short pin, finish the job in as short time as possible.
3. Take care not to apply excessive stress to the flexible board (FPC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

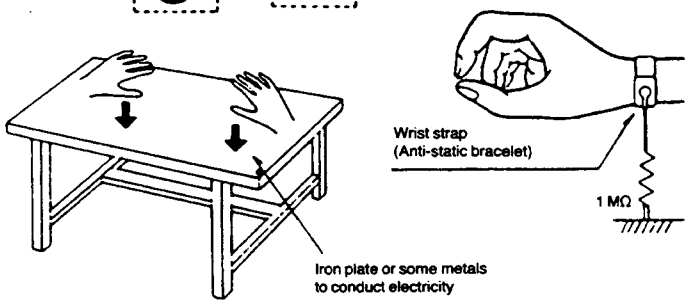
•Grounding for electrostatic breakdown prevention

1. Human body grounding
   Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
   Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution:
The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).

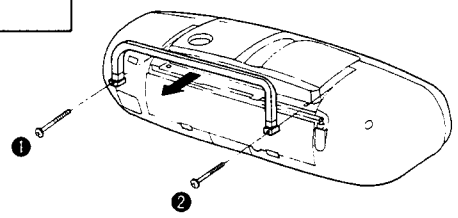




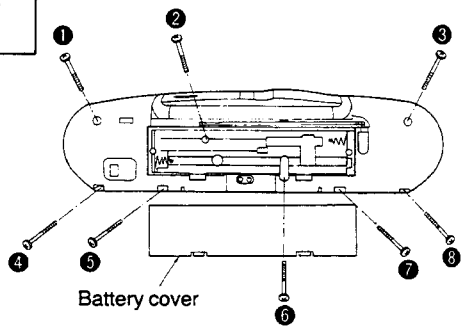


■ DISASSEMBLY INSTRUCTIONS

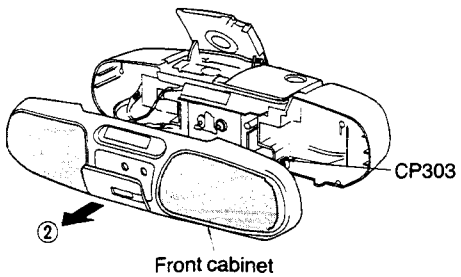
Ref. No. 1	Removal of the Handle	Ref. No. 2	Removal of the Front Cabinet
Procedure 1		Procedure 1→2	



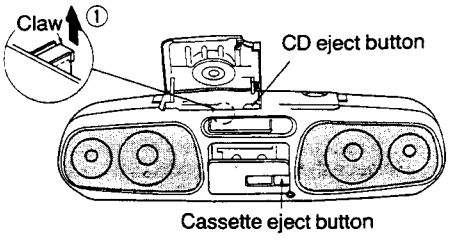
1. Remove 2 screws (❶, ❷).
2. Remove the handle in the direction of arrow.



1. Remove the battery cover.
2. Remove 8 screws (❶~❽).

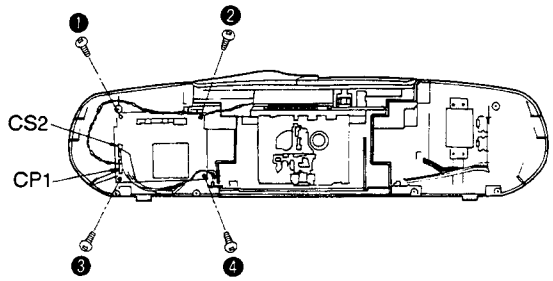


6. Remove the front cabinet in the direction of arrow ②.
7. Release the connector (CP303).



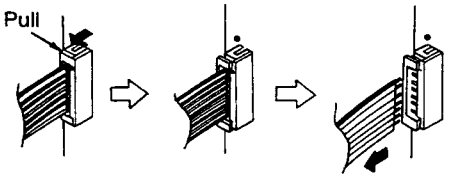
3. Press the cassette eject button and then open the cassette holder.
4. Press the CD eject button and then open the CD cover.
5. Release the claw in the direction of arrow ①.

Ref. No. 3	Removal of the Tuner P.C.B.
Procedure 1→2→3	

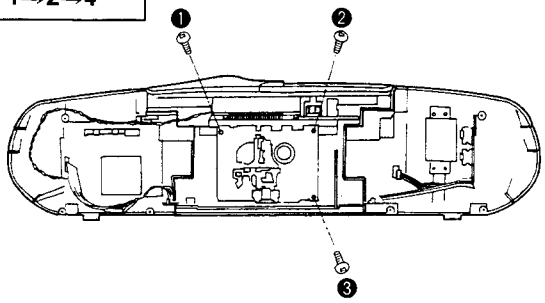


1. Remove 4 screws (❶~❹).
2. Release 2 connectors (CP1, CS2).

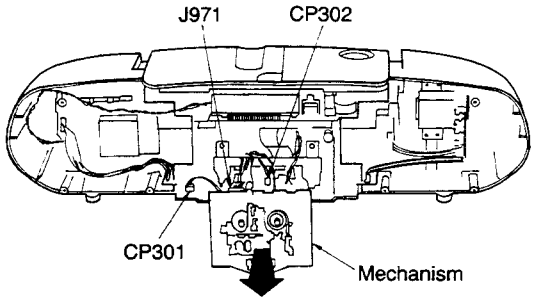
•Removal of the connector (CS2).



Ref. No. 4	Removal of the Mechanism
Procedure 1→2→4	

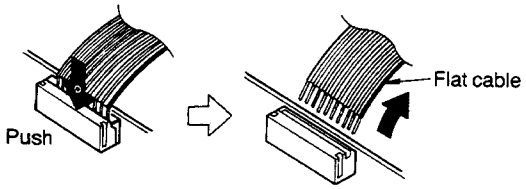


1. Remove 3 screws (❶~❸).

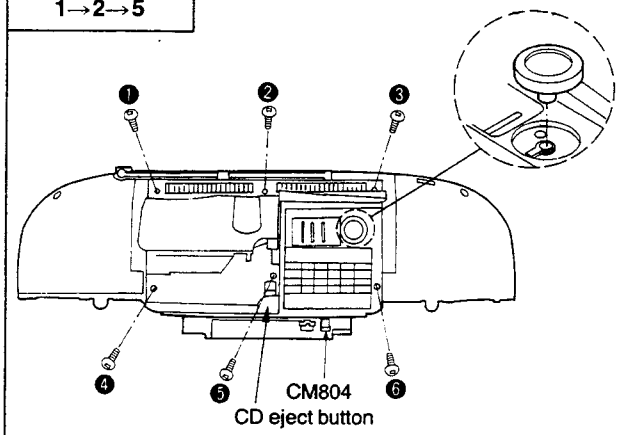


2. Pull out the mechanism.
3. Release 3 connectors (CP301, CP302, J971).

•Removal of the connector (J971).

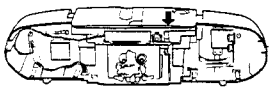


Ref. No. 5	Removal of the Upper Cabinet
Procedure 1→2→5	

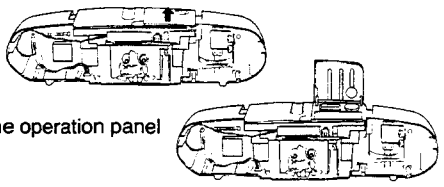


1. Press the CD eject button and then open the CD cover.
2. Open the operation panel cover.
3. Remove the volume knob.
4. Remove 6 screws (❶~❻).
5. Release the connector (CM804).

•Open the operation panel cover.

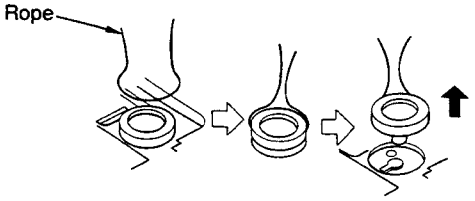


1. Press the operation panel cover.

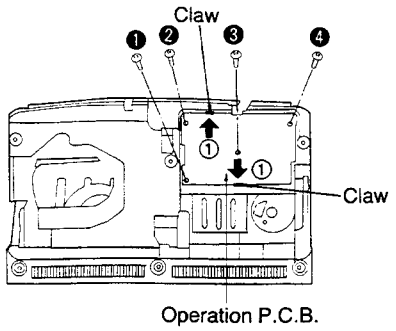


2. Lift up the operation panel cover.

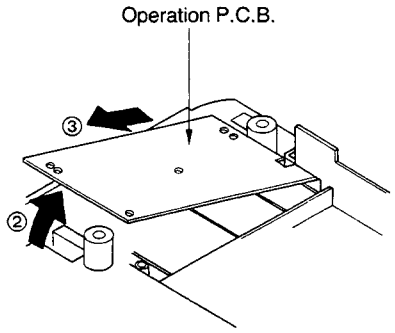
•Removal of the volume knob.



Ref. No. 6	Removal of the Operation P.C.B.
Procedure 1→2→5→6	

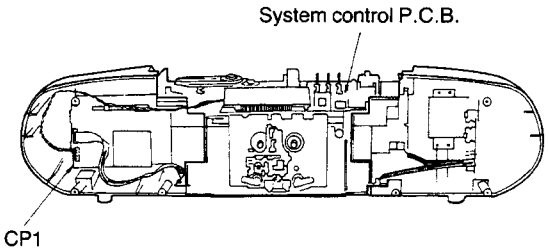


1. Remove 4 screws (❶~❹).
2. Release 2 claws in the direction of arrows ①.

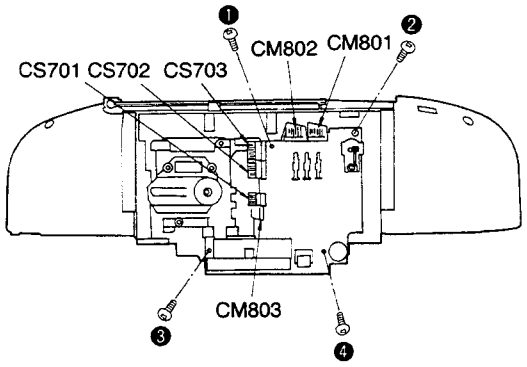


3. Remove the operation P.C.B. in the direction of arrow ② ③.

Ref. No. 7	Removal of the System Control P.C.B.
Procedure 1→2→5→7	

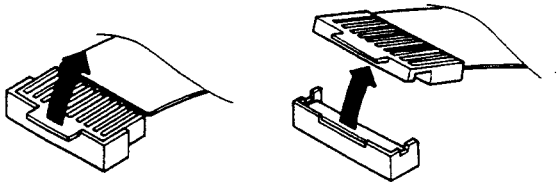


1. Remove the connector (CP1).

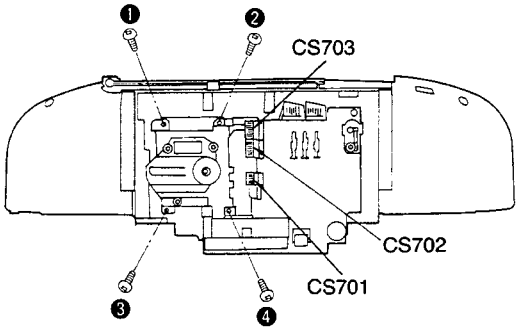


2. Remove 4 screws (❶~❹).
3. Release 6 connectors (CS701, CS702, CS703, CM801, CM802, CM803).

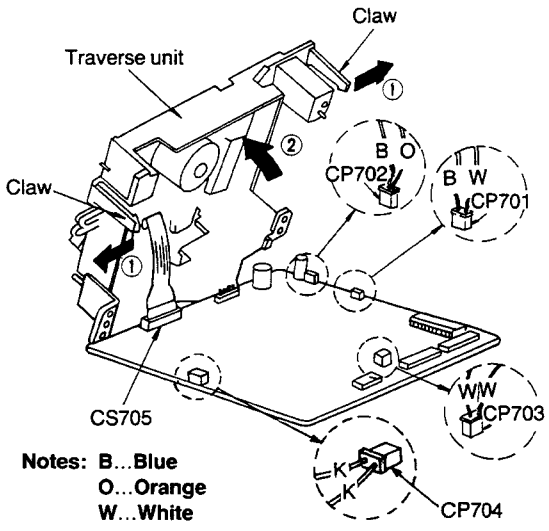
•Removal of the connectors (CS701, CS702, CS703).



Ref. No. 8	Removal of the CD P.C.B.
Procedure 1→2→5→8	



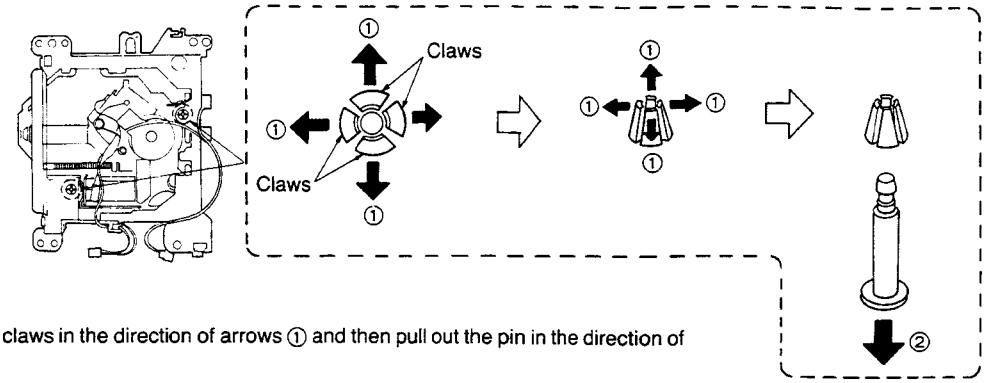
1. Release 3 connectors (CS701, CS702, CS703).
2. Remove 4 screws (❶~❹).



Notes: B...Blue
O...Orange
W...White
K...Black

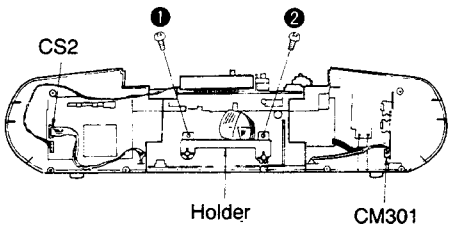
3. Release 2 claws in the direction of arrows ①.
4. Lift up the traverse unit in the direction of arrow ②.
5. Release 5 connectors (CP701, CP702, CP703, CP704, CS705).

Ref. No. 9	Removal of the Traverse Unit
Procedure 1→2→5→8→9	

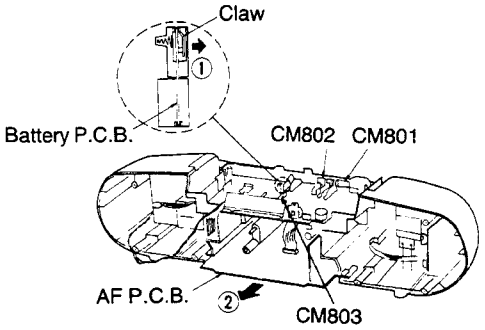


●Release 4 claws in the direction of arrows ① and then pull out the pin in the direction of arrow ②.

Ref. No. 10	Removal of the AF P.C.B.
Procedure 1→2→4→5→8→10	

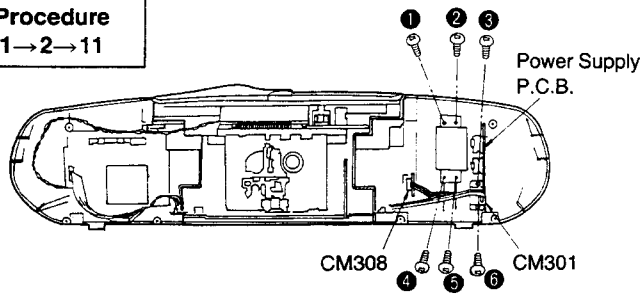


1. Remove 2 screws (❶, ❷).
2. Remove the holder.
3. Release 2 connectors (CS2, CM301).



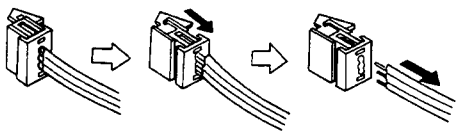
4. Release the claw in the direction of arrow ① and then pull out the battery P.C.B.
5. Release 3 connectors (CM801, CM802, CM803).
6. Remove the AF P.C.B. in the direction of arrow ②.

Ref. No. 11	Removal of the Power Supply P.C.B.
Procedure 1→2→11	



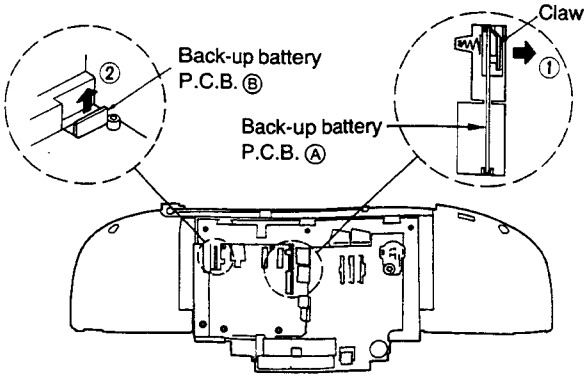
1. Release 2 connectors (CM301, CM308).
2. Remove 6 screws (❶~❻).
3. Pull out the power supply P.C.B.

●**Removal of the connector (CM301).**

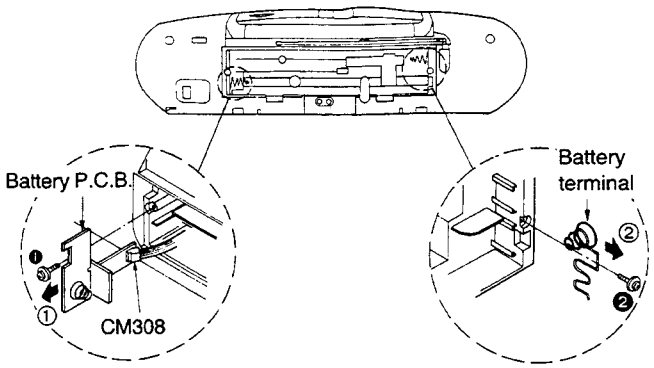


Ref. No. 12	Removal of the Back-up Battery P.C.B.
Procedure 1→2→5→8→12	

1. Release the claw in the direction of arrow ① and then pull out the back-up battery P.C.B. Ⓐ.
2. Pull out the back-up battery P.C.B. Ⓑ in the direction of arrow ②.



Ref. No. 13	Removal of the Battery P.C.B. and Battery Terminal
Procedure 13	



●Removal of the Battery P.C.B.

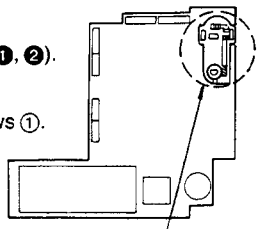
1. Remove the battery cover.
2. Remove the screw (❶).
3. Pull out the battery P.C.B. in the direction of arrow ①.
4. Release the connector (CM308).

●Removal of the Battery Terminal.

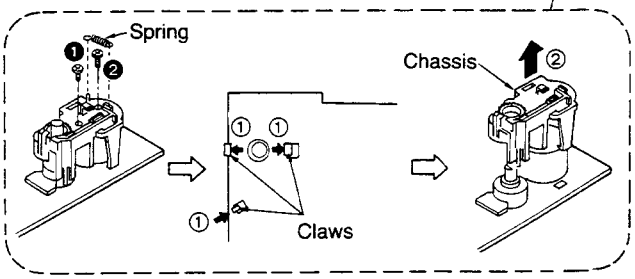
1. Remove the battery cover.
2. Remove the screw (❷).
3. Remove the battery terminal in the direction of arrow ②.

Ref. No. 14	Removal of the Volume Chassis
Procedure 1→2→5→7→14	

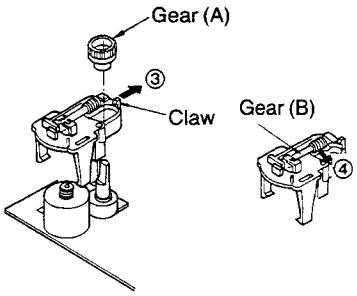
1. Remove the spring.
2. Remove 2 screws (❶, ❷).



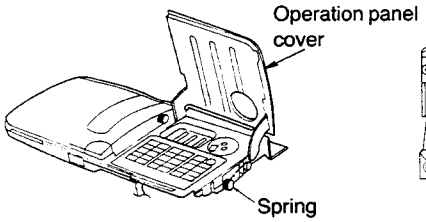
3. Release 3 claws in the direction of arrows ①.
4. Remove the chassis in the direction of arrow ②.



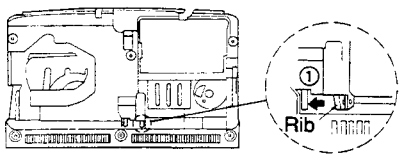
5. Release the claw in the direction of arrow ③ and then pull out the gear (A).
6. Remove the gear (B) in the direction of arrow ④.



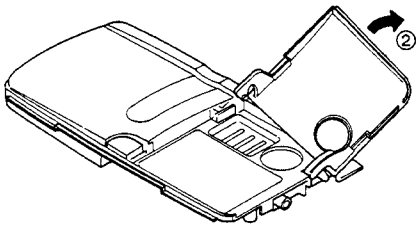
Ref. No. 15	Removal of the Operation Panel Cover
Procedure 1→2→5→15	



1. Remove the spring.

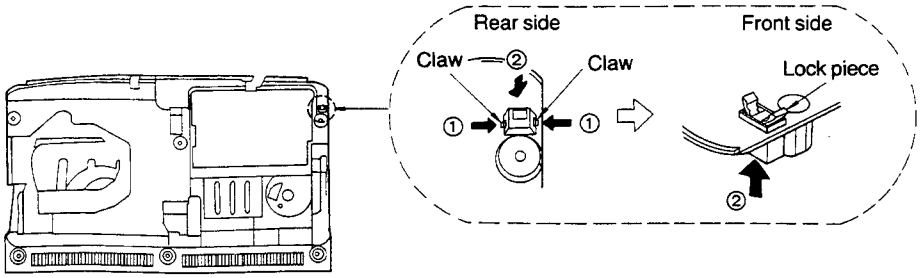


2. Release the rib in the direction of arrow ①.



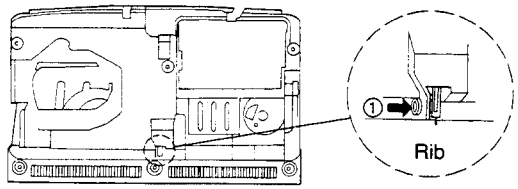
3. Remove the operation panel cover in the direction of arrow ②.

Ref. No. 16	Removal of the Lock Piece
Procedure 1→2→5→16	

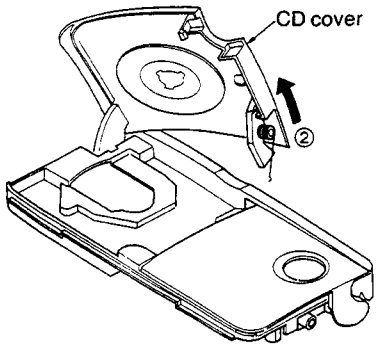


●Press 2 claws in the direction of arrow ① and then remove the lock piece in the direction of arrow ②.

Ref. No. 17	Removal of the CD Cover
Procedure 1→2→5→17	

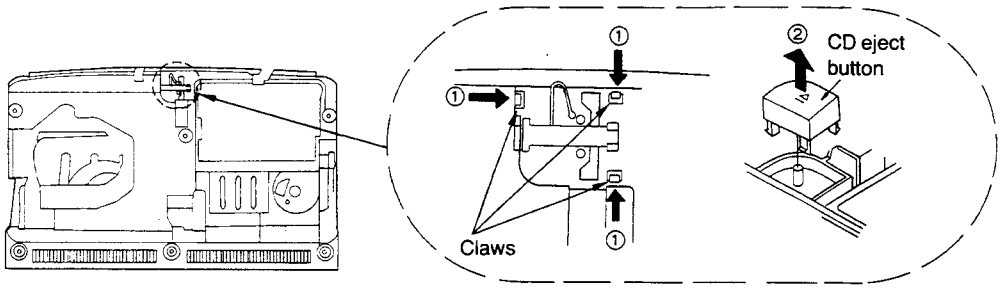


1. Release the rib in the direction of arrow ①.



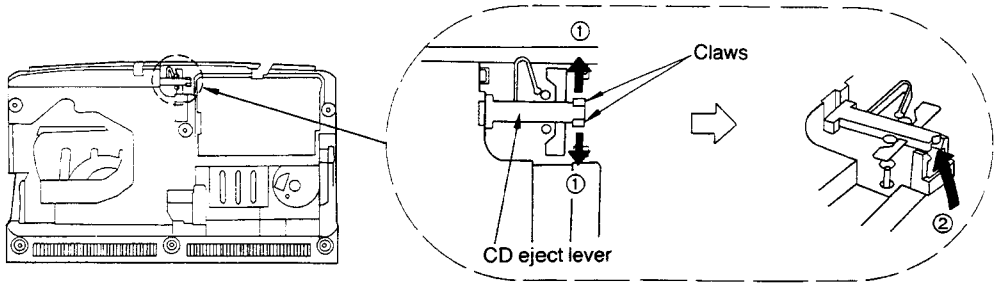
2. Remove the CD cover in the direction of arrow ②.

Ref. No. 18	Removal of the CD Eject Button
Procedure 1→2→5→18	



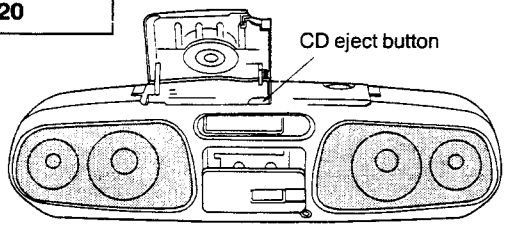
1. Release 3 claws in the direction of arrows ①.
2. Remove the CD eject button in the direction of arrow ②.

Ref. No. 19	Removal of the CD Eject Lever
Procedure 1→2→5→19	

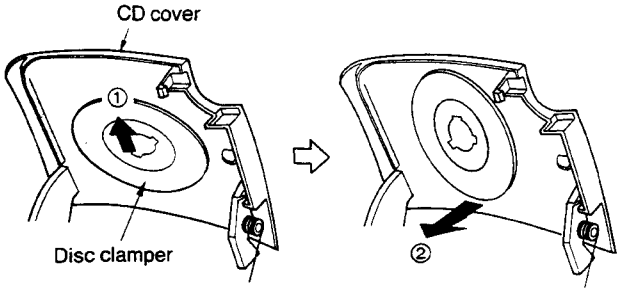


1. Release 2 claws in the direction of arrows ①.
2. Remove the CD eject lever in the direction of arrow ②.

Ref. No. 20	Removal of the Disc Clamper
Procedure 20	

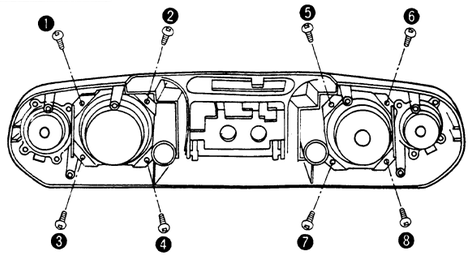


1. Press the CD eject button and then open the CD cover.

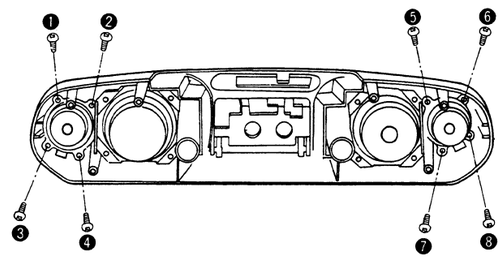


2. Slide the disc clamper in the direction of arrow ① and then remove the disc clamper in the direction of arrow ②.

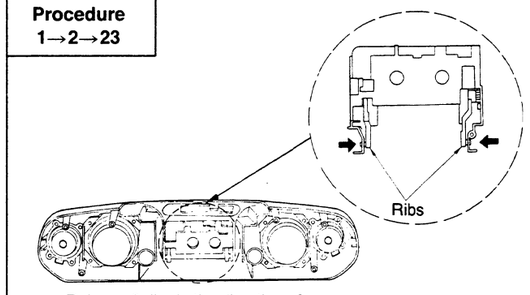
Ref. No. 21	Removal of the Woofer Speaker
Procedure 1→2→21	●Remove 8 screws (❶~❽).



Ref. No. 22	Removal of the Tweeter Speaker
Procedure 1→2→22	●Remove 8 screws (❶~❽).

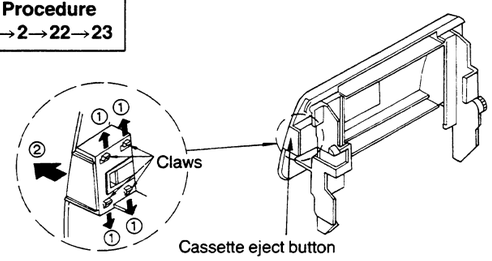


Ref. No. 23	Removal of the Cassette Holder
Procedure 1→2→23	



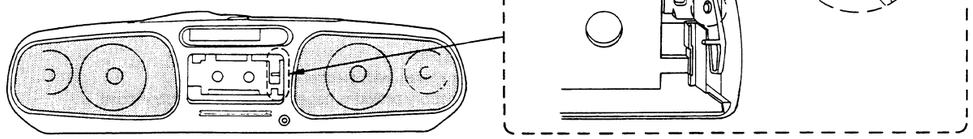
●Release 2 ribs in the direction of arrows.

Ref. No. 24	Removal of the Cassette Eject Button
Procedure 1→2→22→23	



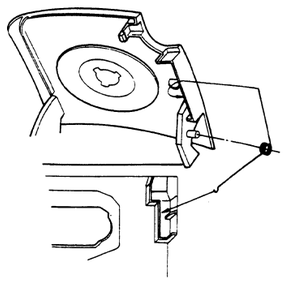
●Release 4 claws in the direction of arrows ① and then remove the cassette eject button in the direction of arrow ②.

Ref. No. 25	Removal of the Cassette Eject Lever
Procedure 1→2→22→25	

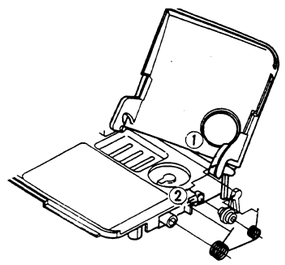


●Release 2 claws in the direction of arrows ① and then remove the cassette eject lever in the direction of arrow ②.

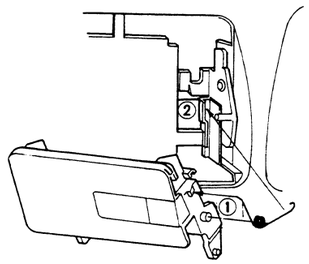
■ CD COVER ASSEMBLY



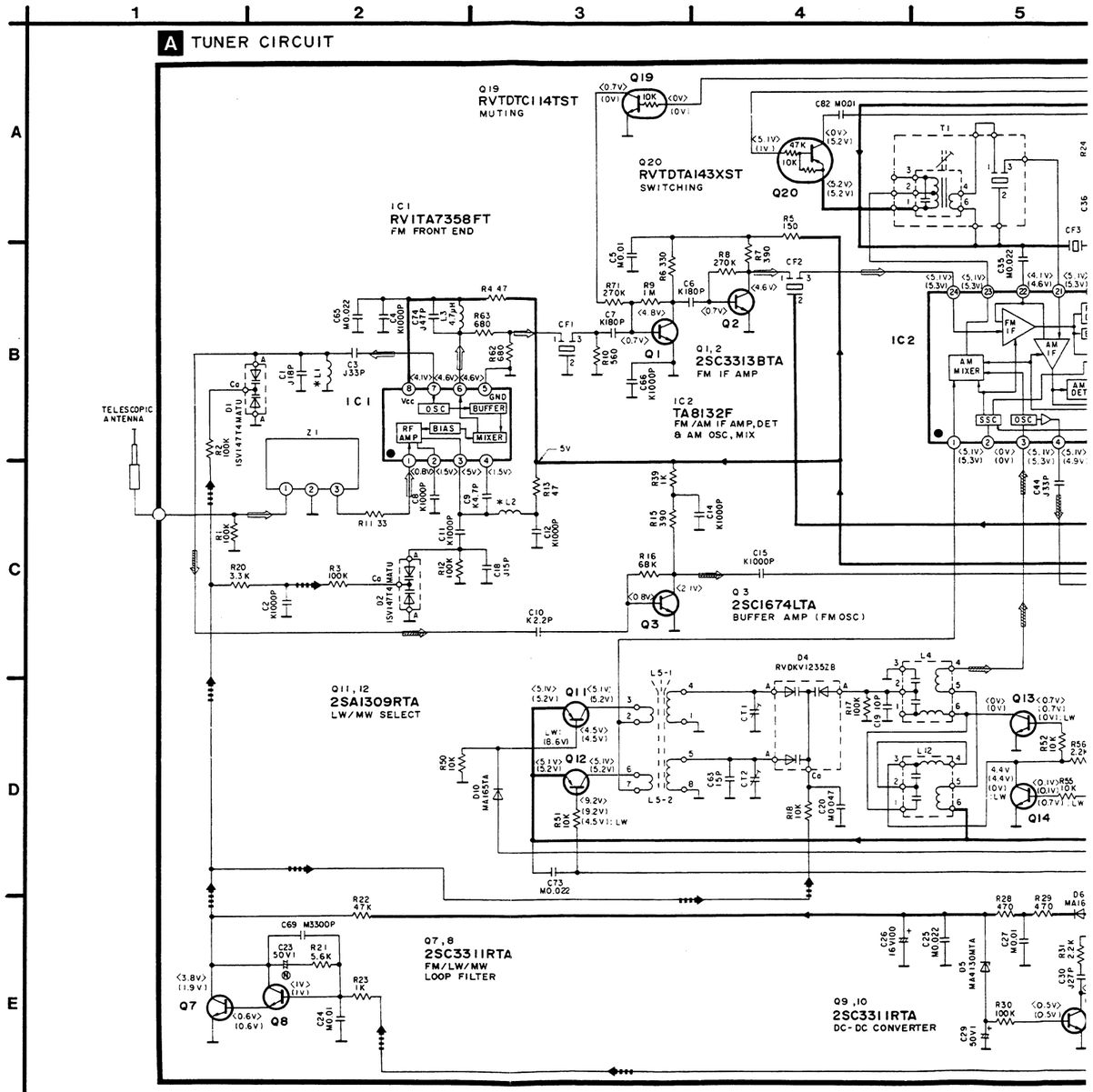
■ OPERATION PANEL COVER ASSEMBLY



■ CASSETTE HOLDER ASSEMBLY



■ SCHEMATIC DIAGRAM ●TUNER CIRCUIT (Parts list on pages 57~63)

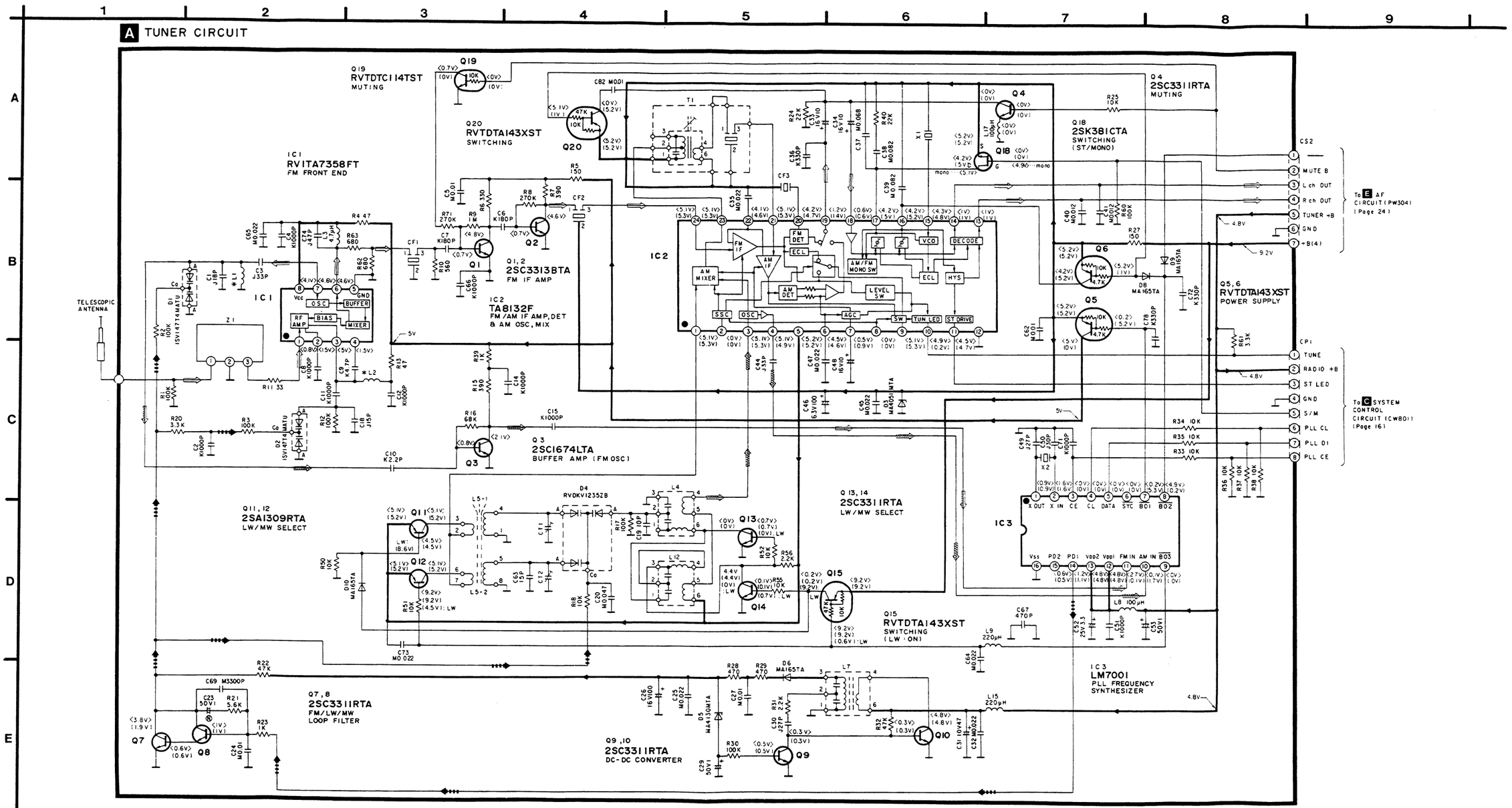

A TUNER CIRCUIT
Q19 RVTDTC114TST MUTING
Q20 RVTDTA143XST SWITCHING
IC1 RVITA7358FT FM FRONT END
Q1,2 2SC3313BTA FM IF AMP
IC2 TA8132F FM/AM IF AMP,DET & AM OSC,MIX
Q3 2SC1674LTA BUFFER AMP (FM OSC)
Q11,12 2SA1309RTA LW/MW SELECT
Q7,8 2SC3311RTA FM/LW/MW LOOP FILTER
Q9,10 2SC3311RTA DC-DC CONVERTER
TELESCOPIC ANTENNA
5V

Notes:

●DC voltage measurements are taken with electronics voltmeter.
The negative terminal of the battery provides negative meter connection point.
( )...MW/LW < >...FM

●This schematic diagram may be modified at any time with the development of new technology.

■ SCHEMATIC DIAGRAM •TUNER CIRCUIT (Parts list on pages 57~63)

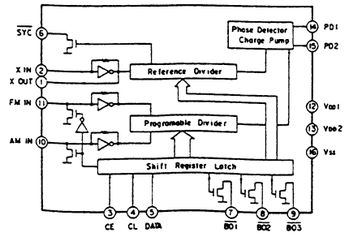


Notes:

- DC voltage measurements are taken with electronics voltmeter.
  The negative terminal of the battery provides negative meter connection point.
  ( )...MW/LW < >...FM
- **This schematic diagram may be modified at any time with the development of new technology.**

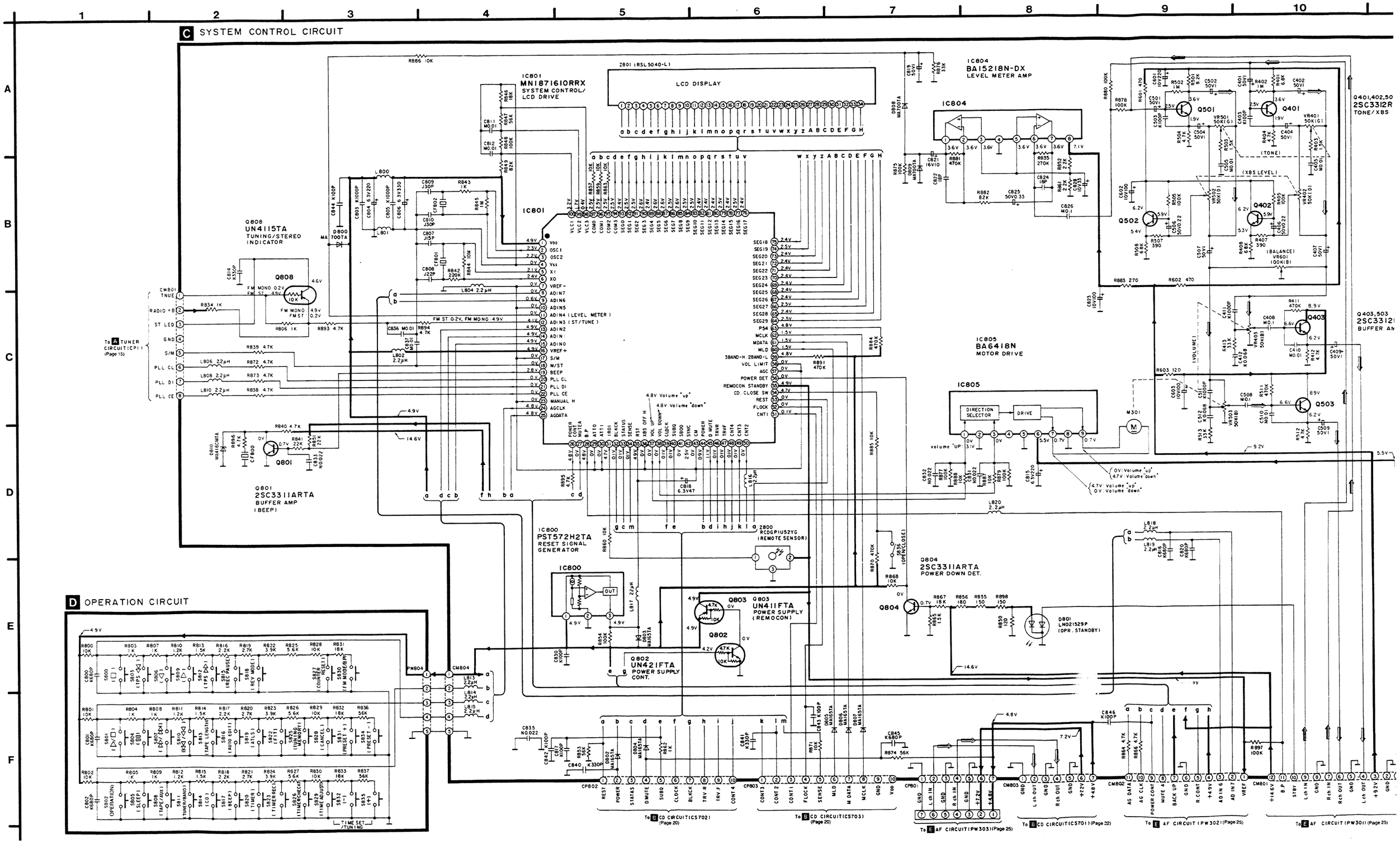
: FM signal line
: FM OSC signal line
: LW/MW OSC signal line
: FM/MW/LW V-cap control line
: +B line

■ IC3 (LM7001)

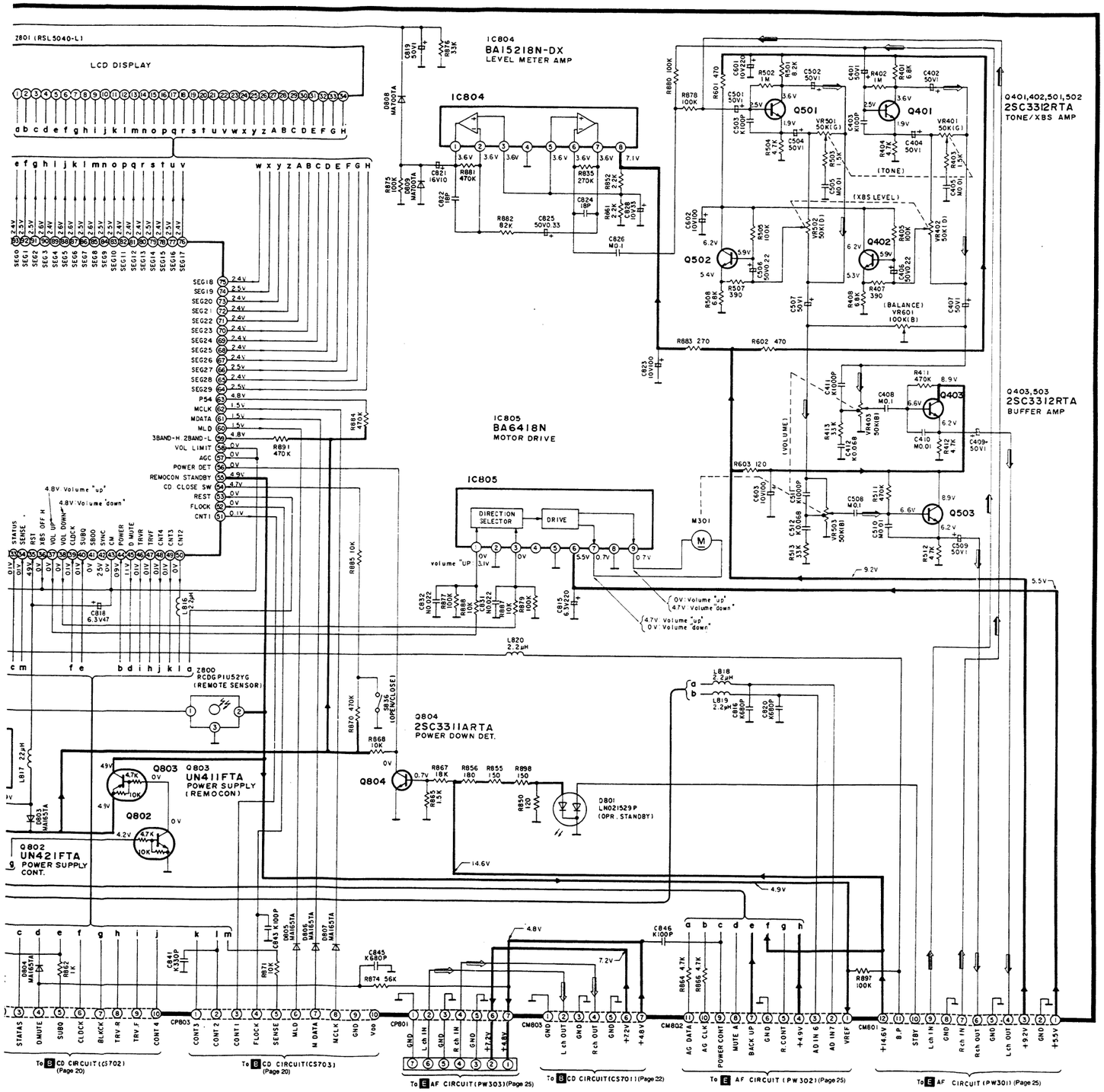


RX-DS45 RX-DS45

■ SCHEMATIC DIAGRAM •SYSTEM CONTROL AND OPERATION CIRCUIT (Parts list on pages 57~63)


C SYSTEM CONTROL CIRCUIT
IC801 MN1871610RRX SYSTEM CONTROL/ LCD DRIVE
Z801 (RSL5040-L) LCD DISPLAY
IC804 BA15218N-DX LEVEL METER AMP
IC805 BA6418N MOTOR DRIVE
Q808 UN4115TA TUNING/STEREO INDICATOR
Q801 2SC3311ARTA BUFFER AMP (BEEP)
IC800 PST572H2TA RESET SIGNAL GENERATOR
Z800 RCDGP1U52YG (REMOTE SENSOR)
Q803 UN411FTA POWER SUPPLY (REMOCON)
Q802 UN421FTA POWER SUPPLY CONT.
Q804 2SC3311ARTA POWER DOWN DET.
Q501
Q401
Q502
Q402
Q403
Q503
Q401,402,50 2SC3312R TONE/XBS
0403,503 2SC3312 BUFFER AM
D OPERATION CIRCUIT
To A TUNER CIRCUIT(CP1) (Page 15)
To B CD CIRCUIT(CS702) (Page 20)
To B CD CIRCUIT(CS703) (Page 20)
To E AF CIRCUIT(PW303) (Page 25)
To B CD CIRCUIT(CS701) (Page 22)
To E AF CIRCUIT(PW302) (Page 25)
To E AF CIRCUIT(PW301) (Page 25)

list on pages 57~63)



NOTES:

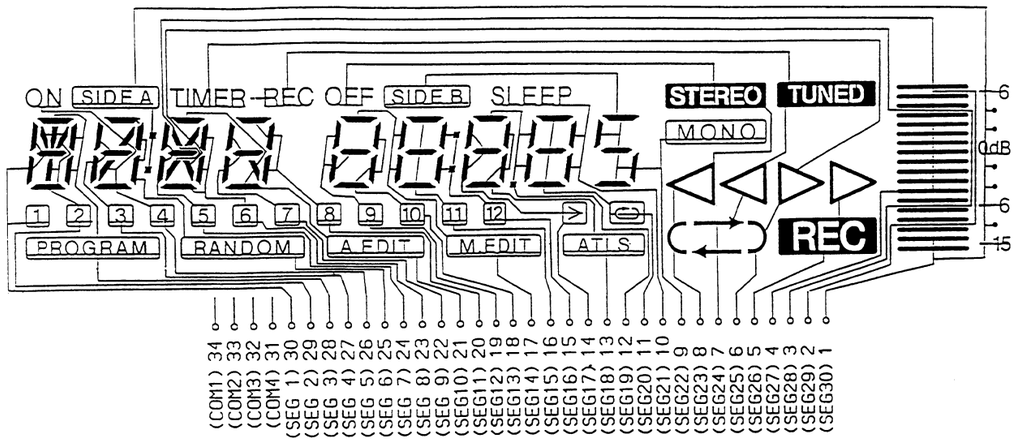
- •S800 : Deck stop switch. (□)
- •S801 : CD playback/stop switch. (▷/□)
- •S802 : Operation switch. (OPERATION)
- •S803 : Deck fast/TPS switch. (◁◁/TPS)
- •S804 : CD pause switch. (▯▯)
- •S805 : Sleep switch. (SLEEP)
- •S806 : Deck reverse side playback switch. (◁)
- •S807 : CD skip/search switch. (▷▷/▷▷▯)
- •S808 : Function select switch. (TAPE/AUX)
- •S809 : Deck front side playback switch. (▷)
- •S810 : CD skip/search switch. (▯◁◁/◁◁)
- •S811 : Function select switch. (TUNER/BAND)
- •S812 : Deck fast/TPS switch. (TPS/▷▷)
- •S813 : Tape length switch. (TAPE LENGTH)
- •S814 : Function select switch. (CD)
- •S815 : Recording pause switch. (REC PAUSE)
- •S816 : Auto editing switch. (AUTO EDIT)
- •S817 : Beep on/off switch. (BEEP)
- •S818 : Reverse mode select switch. (REVERSE MODE)
- •S819 : ATLS switch. (ATLS)
- •S820 : Timer set switch. (TIMER)
- •S822 : Fit edit switch. (FIT)
- •S823 : Timer recording switch. (TIMER REC)
- •S825 : Tuning memory switch. (TUNING MEMORY)
- •S826 : Timer check switch. (TIMER CHECK)
- •S827 : Tape counter reset switch. (COUNTER RESET)
- •S828 : CD program cancel switch. (CANCEL)
- •S829 : Time set switch. (TIME ADJUST)
- •S830 : FM mode select/beat proof switch. (FM MODE/B.P.)
- •S831 : Preset tuning switch. (+)
- •S832 : Time set/manual tuning switch. (−)
- •S834 : Preset tuning switch. (−)
- •S835 : Time set/manual tuning switch. (+)
- •S836 : CD cover open/close switch.
- •VR401 : Tone control VR (Lch)
- •VR402 : S-XBS level control VR (Lch)
- •VR403 : Volume control VR (Lch)
- •VR501 : Tone control VR (Rch)
- •VR502 : S-XBS level control VR (Rch)
- •VR503 : Volume control VR (Rch)
- •VR601 : Balance control VR (Rch)
- •DC voltage measurements are taken with electronics voltmeter.
  The negative terminal of the battery provides negative meter connection point.

•This schematic diagram may be modified at any time with the development of new technology.

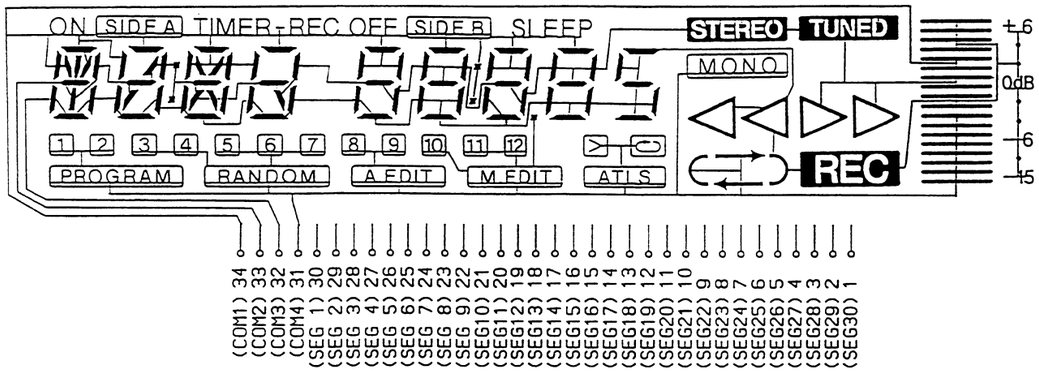
: +B line : CD signal line : Main signal line

■ LIQUID CRYSTAL DISPLAY (LCD)

●SEGMENT



●COMMON



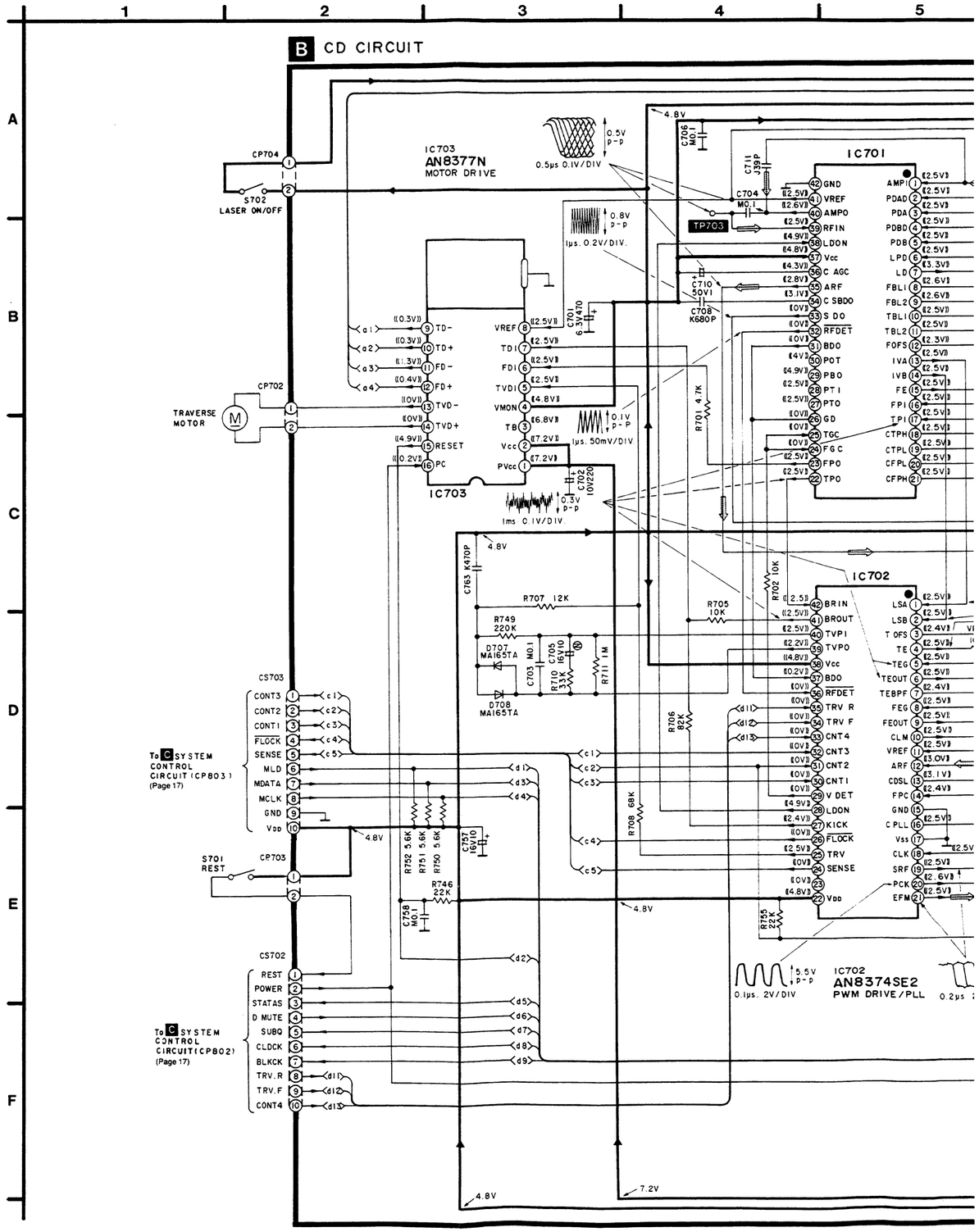
Notes:

- ●S701 : Rest switch.
- ●S702 : Laser ON/OFF switch.
- ●VR701 : Best eye adjustment VR.
- ●VR702 : Tracking balance adjustment VR.
- ●VR703 : Focus offset adjustment VR.
- ●VR704 : Focus gain adjustment VR.
- ●VR705 : Tracking gain adjustment VR.
- ●VR706 : Tracking offset adjustment VR.
- ●DC voltage measurements are taken with electronics voltmeter.
  The negative terminal of the battery provides negative meter connection point.
  (( )) ...CD

●This schematic diagram may be modified at any time with the development of new technology.

⟹: CD signal line ➡: +B line

■ SCHEMATIC DIAGRAM ●CD CIRCUIT (Parts list on pages 57~63)



5 6 7 8 9 10 11 12 13 14

IC701
AN8373SE2
CD SERVO SYSTEM

Q701
2SA1309STA
LASER AMP

IC702
AN8374SE2
PWM DRIVE/PLL

IC704
MN6625
SIGNAL PROCESSOR

IC705
LC3517BMLTP
DE INTERLEAVE

IC706
TA8410P
MOTOR DRIVE

IC707
SM5807ESE2
DIGITAL FILTER

IC708
UPD6376GSE2
D/A CONV./BUFFER AMP

Q703
UN4110TA
SWITCHING
(DE-EMPHASIS)

Q704,705
UN4216TA
SWITCHING
(DE-EMPHASIS)

CP705
TEST CONNECTOR

CP701
SPINDLE MOTOR

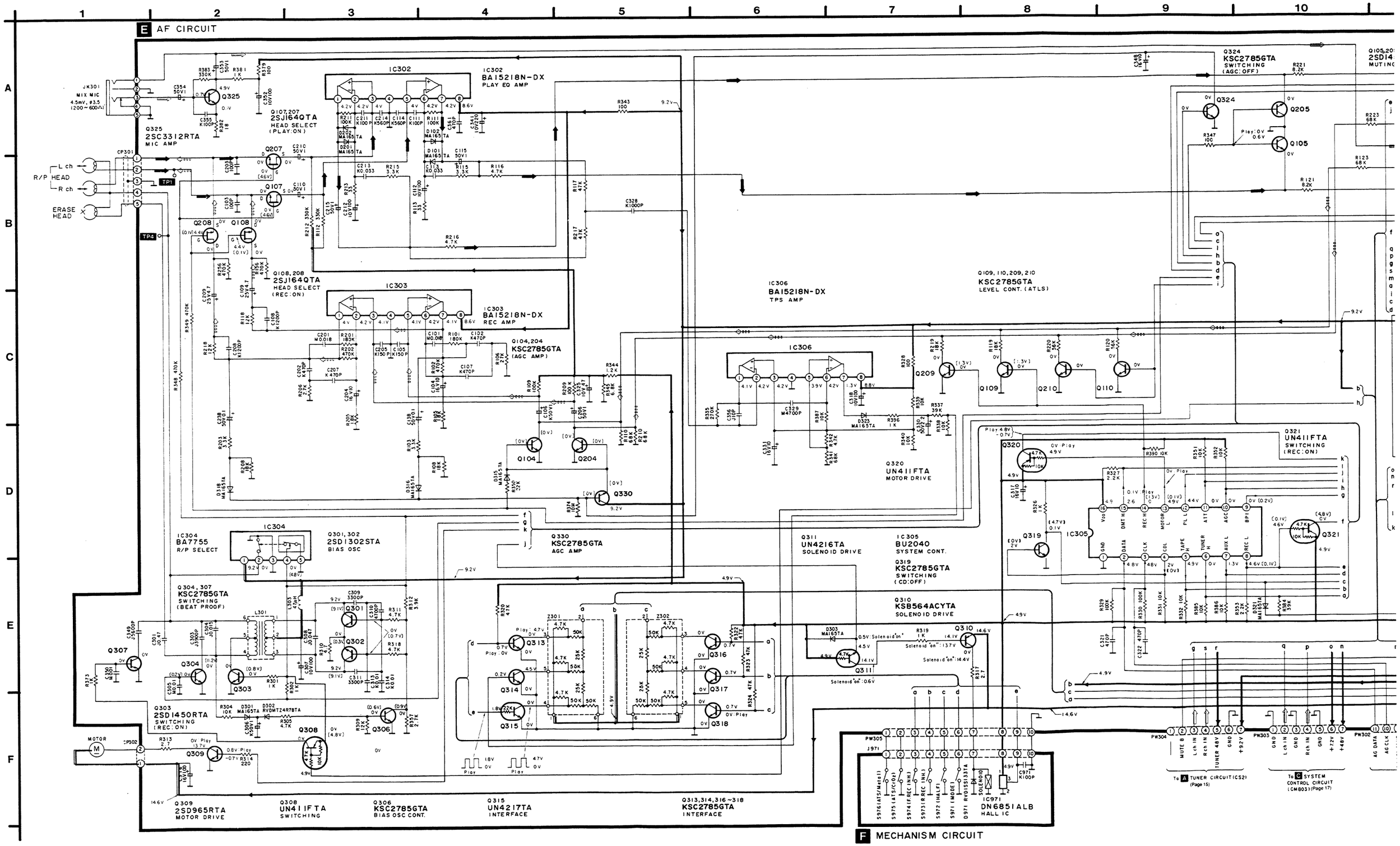
OPTICAL PICKUP CIRCUIT

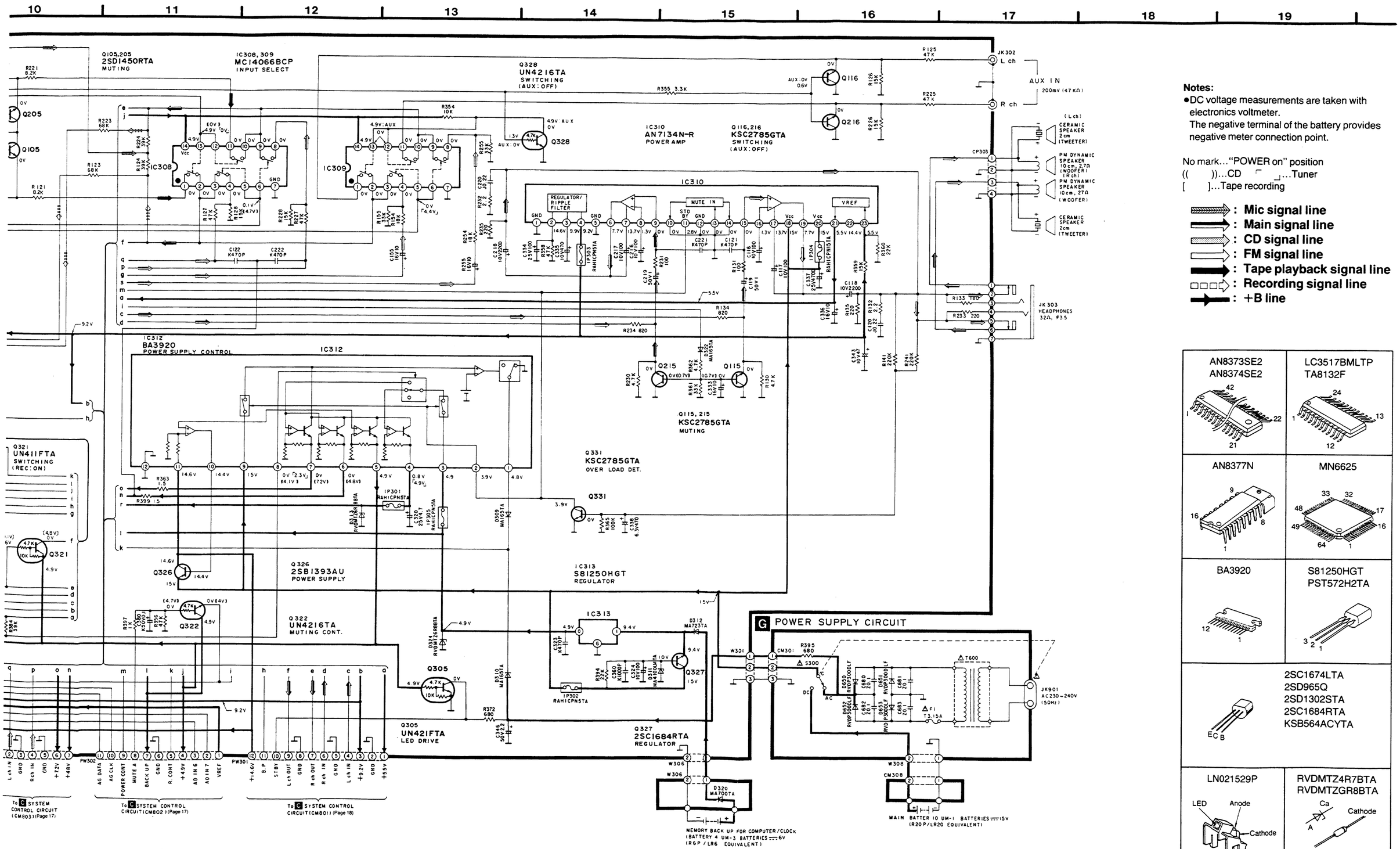
CS705

CS701
To C SYSTEM CONTROL CIRCUIT (CP801) (Page 17)

TP708 TP706 TP705 TP704 TP701

■ SCHEMATIC DIAGRAM •AF, MECHANISM AND POWER SUPPLY CIRCUIT (Parts list on pages 57~63)





Notes:

- DC voltage measurements are taken with electronics voltmeter.
  The negative terminal of the battery provides negative meter connection point.

No mark..."POWER on" position
(( ))...CD ⌜ ⌟...Tuner
[ ]...Tape recording

- : **Mic signal line**
- : **Main signal line**
- : **CD signal line**
- : **FM signal line**
- : **Tape playback signal line**
- : **Recording signal line**
- : **+B line**

AN8373SE2 AN8374SE2	LC3517BMLTP TA8132F
AN8377N	MN6625
BA3920	S81250HGT PST572H2TA
2SC1674LTA 2SD965Q 2SD1302STA 2SC1684RTA KSB564ACYTA	
LN021529P	RVDMTZ4R7BTA RVDMTZGR8BTA

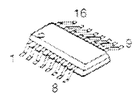
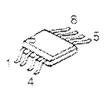
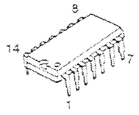
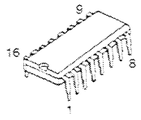
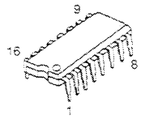
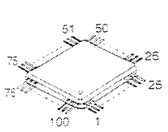
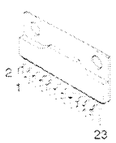
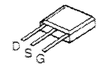
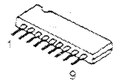
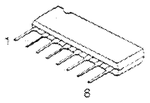
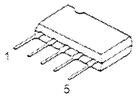
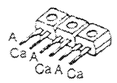
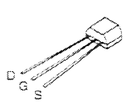
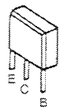
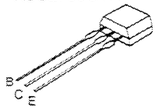
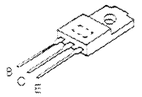
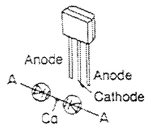
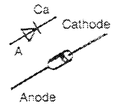
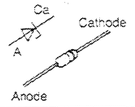
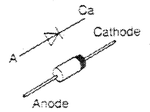
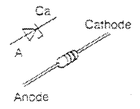
Notes:
- S300 : AC/DC select switch in "AC" position.
- S971 : Deck mode detect switch.
- S972 : Deck cassette tape insertion detect switch.
- S973 : Deck record prevention tab detect switch. (REV)
- S974 : Deck record prevention tab detect switch. (FWD)
- Battery current:

Vol min....199 mA (MW/LW)	Vol max....461 mA (MW/LW)
202 mA (FM)	561 mA (FM)
268 mA (Tape)	762 mA (Tape)
390 mA (CD)	1430 mA (CD)

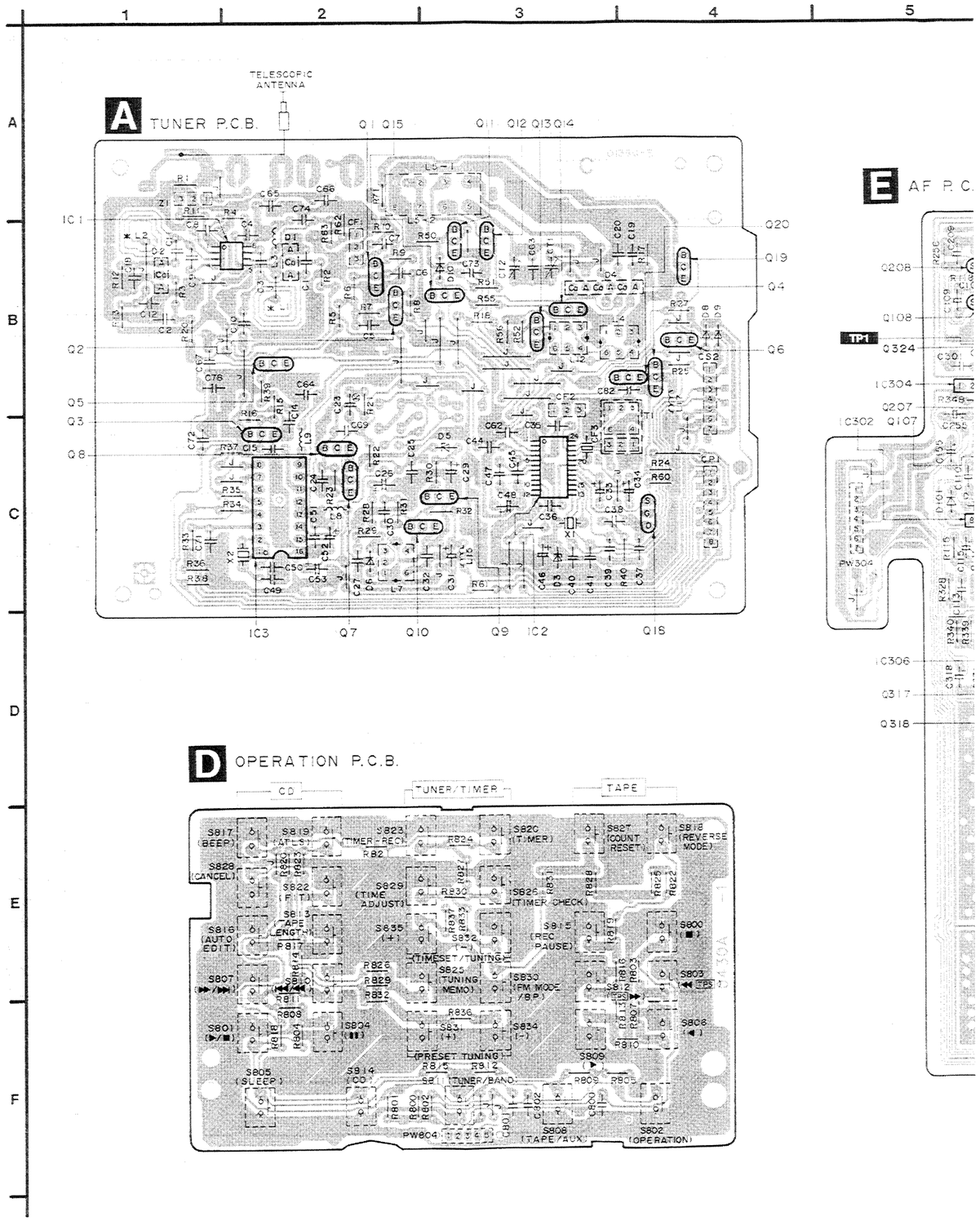
Measurement instruction
MW/LW: 400 Hz, 30% Mod, 74 dB/m
FM: 1 kHz, 30% Mod, 60 dB
CD: 1 kHz playback
Tape: 315 Hz, 0 dB playback

- Important safety notice.
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

- **This schematic diagram may be modified at any time with the development of new technology.**

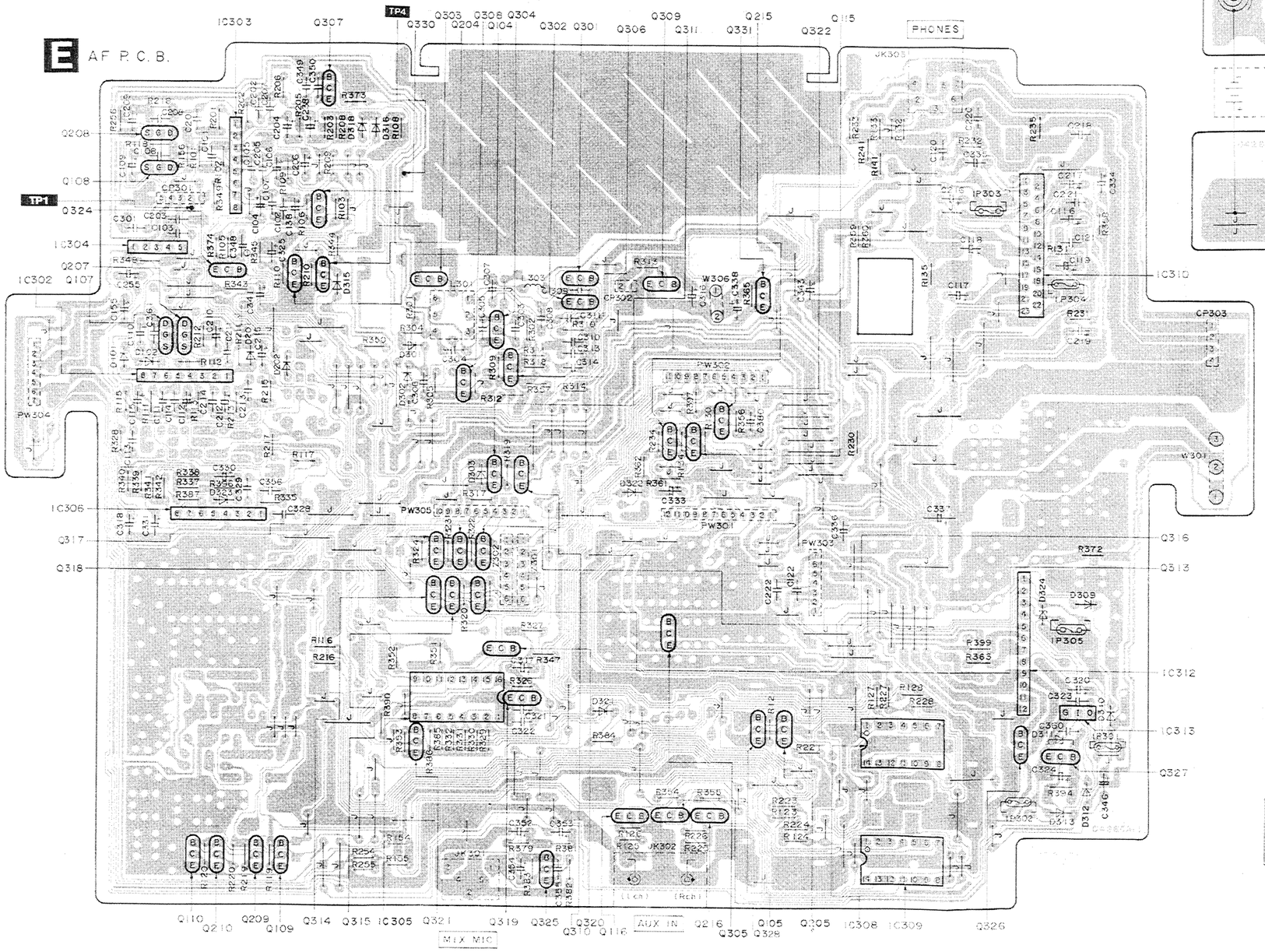
SM5807ESE2 UPD6376GSE2 	RVITA7358FT 	MC14066BCP 	BU2040 	LM7001 TA8410P 	
MN1871610RRX 	AN7134N-R 	2SJ164QTA 	BA6418N 	BA15218N-DX 	BA7755 
RVDKV1235Z2 	2SK381CTA 		2SA1309STA 2SC3311AR 2SC3311R 2SC3312RTA 2SA1309R 2SC3313B 2SD1450RTA UN411FTA	UN421FTA UN4110TA UN4115 UN4216TA UN4217TA UN4216-S	RVTDTA143XST RVTDTC114TST KSC2785GTA 
2SB1393AU 	1SV147T4MATU 		MA165TA MA700TA MA723TA MA165	MA4100LTA MA4130M MA4160M 	RVDP300DLF 
MA4051MTA 					

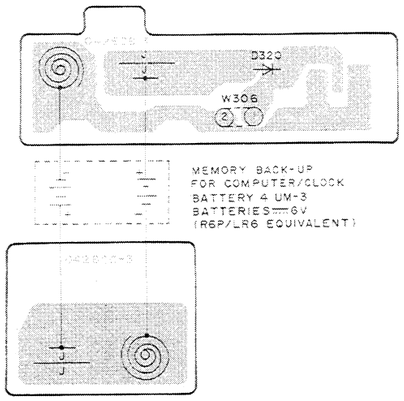
■ CIRCUIT BOARD DIAGRAM

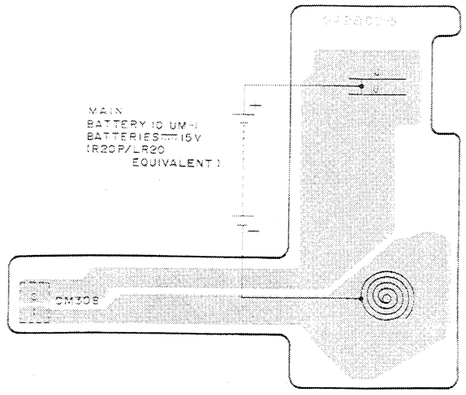


5 6 7 8 9 10 11 12 13 14

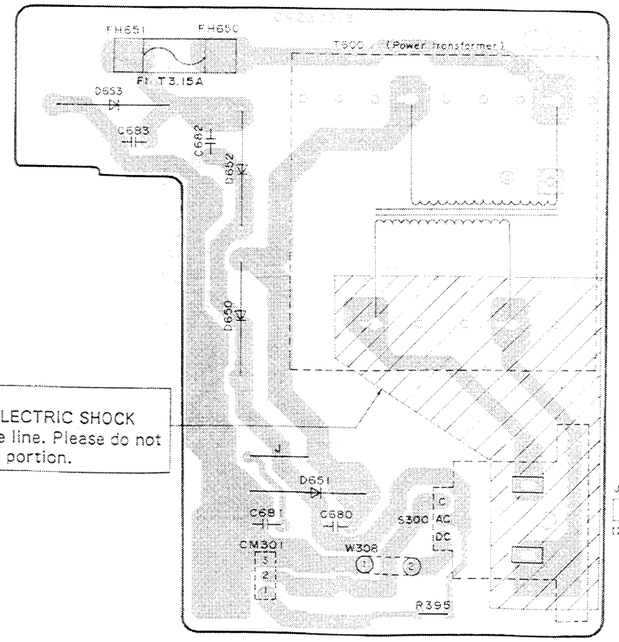
E AF P.C.B.







G POWER SUPPLY P.C.B.



CAUTION
RISK OF ELECTRIC SHOCK
AC voltage line. Please do not touch this portion.

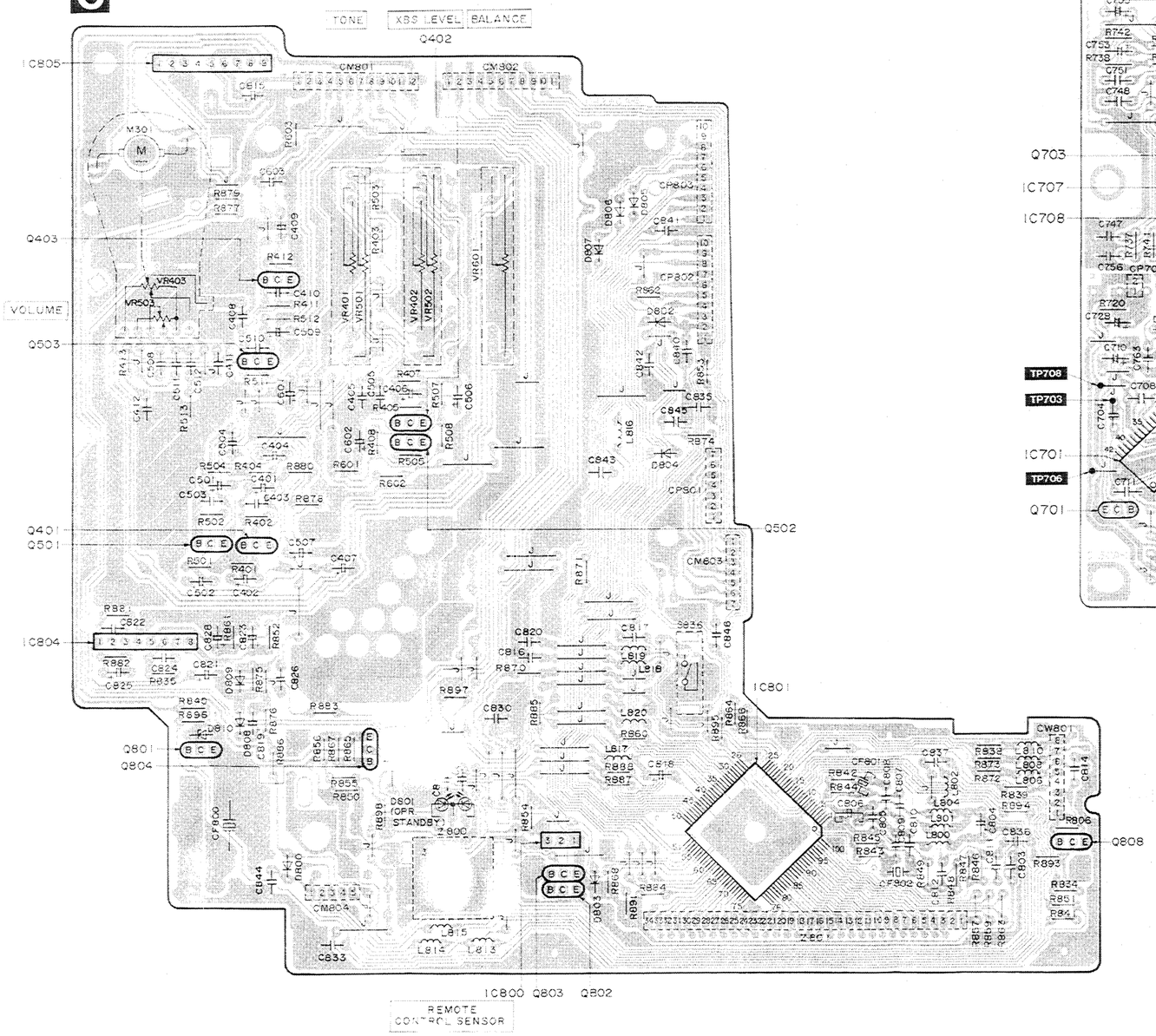
■ CIRCUIT BOARD DIAGRAM

■ WIRI

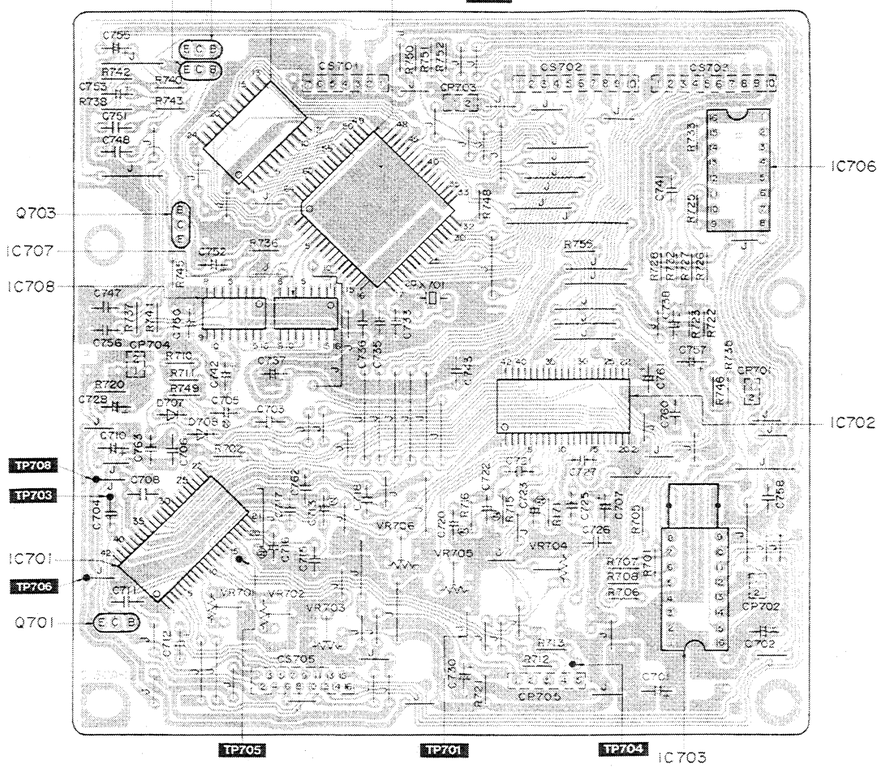
1 2 3 4 5 6 7 8 9

A B C D E F

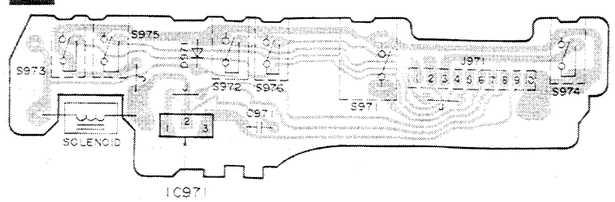
C SYSTEM CONTROL P.C.B.



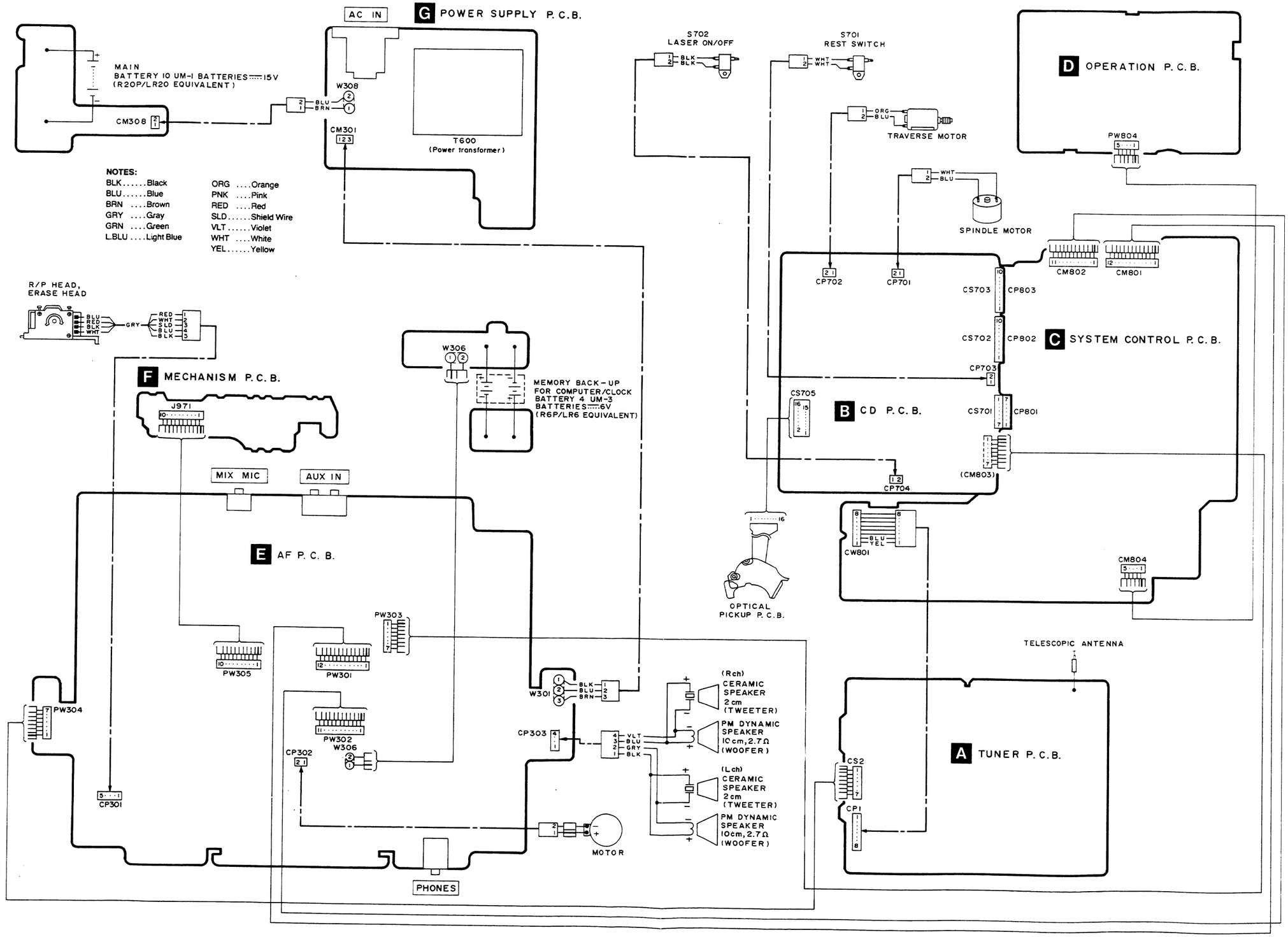
B CD P.C.B.



F MECHANISM P.C.B.



■ WIRING CONNECTION DIAGRAM

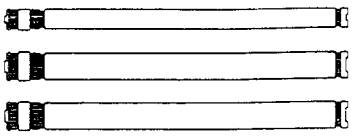


■ USING THE EXTENSION CABLES WHEN CHECKING THE P.C.B.s

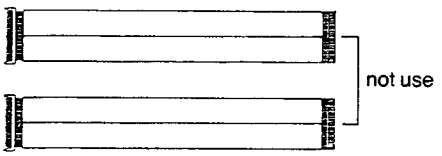
•Extension cables are needed to check the system control P.C.B. and CD P.C.B. in MEASUREMENTS AND ADJUSTMENTS.

Extension cable parts number: **RFKZXDT7** (consisting of one set of 5 cables.)

Components:
•to connect the system control P.C.B. and CD P.C.B.:
7-pin, 1 cable
10-pin, 2 cables

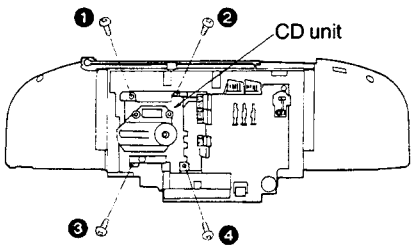


20-pin, 2 cables

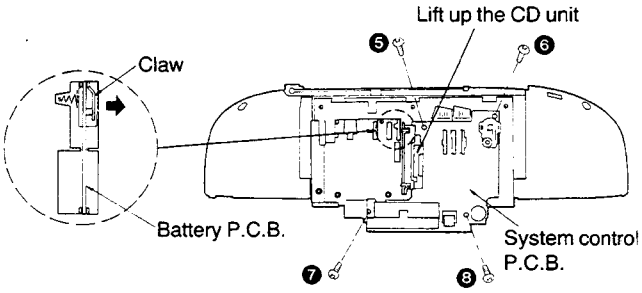


•How to check the AF P.C.B.

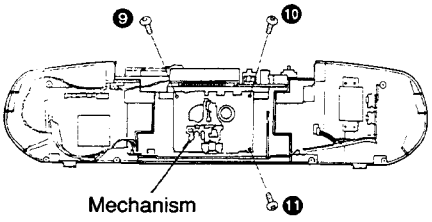
1. Remove the upper cabinet by following the disassembly instructions in Ref. No. 5 in the Removal of the Upper Cabinet (See page 8).



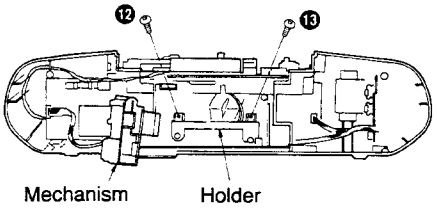
2. Remove 4 screws (❶~❹).
3. Lift up the CD unit.



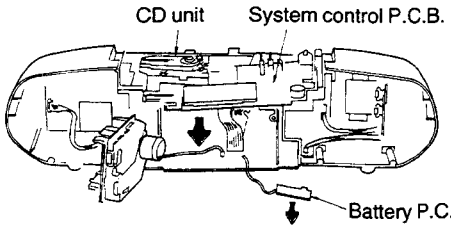
4. Release the claw in the direction of arrow and then pull out the battery P.C.B.
5. Remove 4 screws (❺~❽).



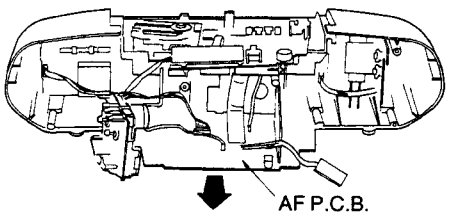
6. Remove 3 screws (❾~⓫) and then pull out the Mechanism.



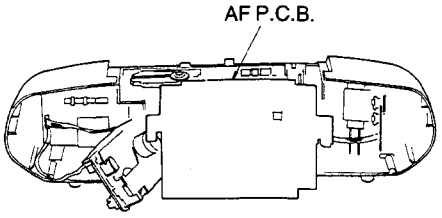
7. Remove 2 screws (⓬, ⓭) and then remove the holder.



8. Pull out the battery P.C.B.
9. Pull out the CD unit and system control P.C.B.



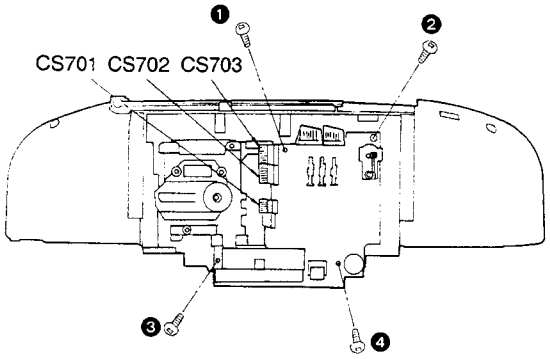
10. Pull out the AF P.C.B.



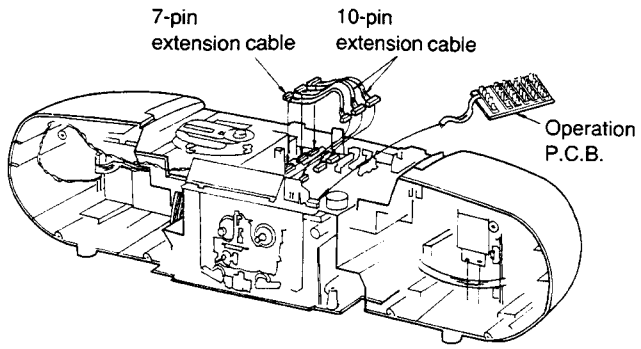
11. Detach the AF P.C.B. as shown in the figure on the left.
12. The side to be measured and checked.

•How to check the system control P.C.B.

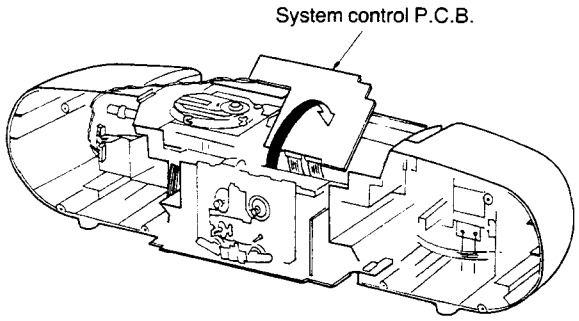
1. Remove the upper cabinet by following the disassembly instructions in Ref. No. 5 in the Removal of the Upper Cabinet (See page 8).
2. Remove the operation P.C.B. by following the disassembly instructions in Ref. No. 6 in the Removal of the Operation P.C.B. (See page 9).

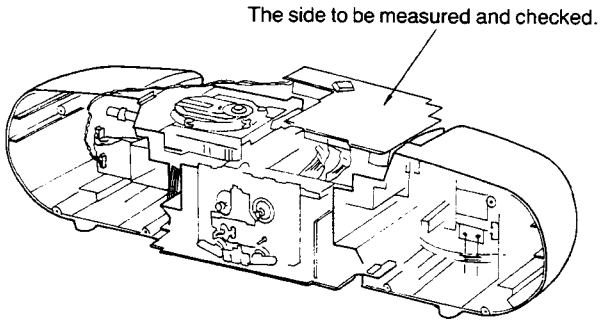


3. Release 3 connectors (CS701, CS702, CS703).
4. Remove 4 screws (❶~❹).



5. Connect the operation P.C.B.
6. Connect the 3 extension cables.

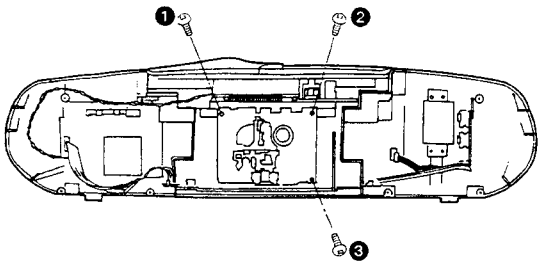




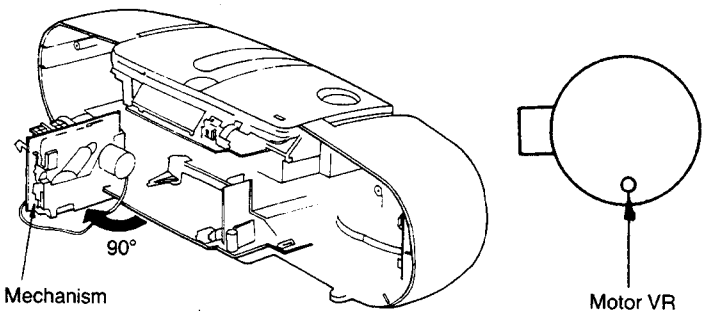
7. Turn the system control P.C.B.

•How to tape speed adjustment

1. Remove the front cabinet by following the disassembly instruction in Ref. No. 2 in the Removal of the Front Cabinet (See page 7).



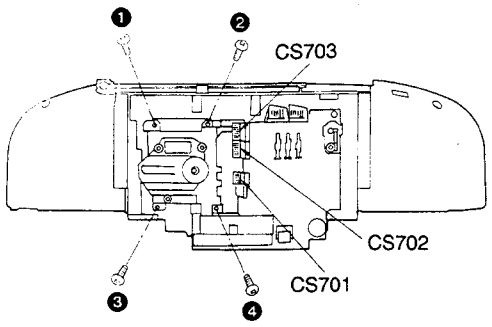
2. Remove 3 screws (❶~❸).



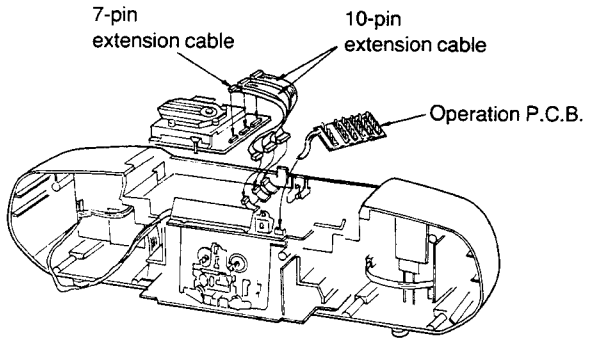
3. Detach the mechanism as shown in the figure. Adjust for motor VR with this position.

•How to check and adjustment the CD P.C.B.

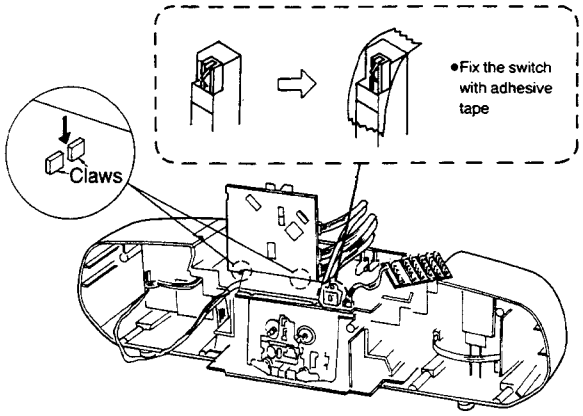
1. Remove the upper cabinet by following the disassembly instructions in Ref. No. 5 in the Removal of the Upper Cabinet (See page 8).
2. Remove the operation P.C.B. by following the disassembly instructions in Ref. No. 6 in the Removal of the Operation P.C.B. (See page 9).



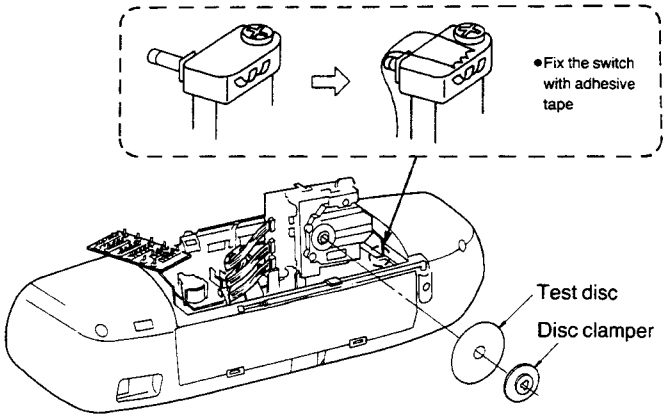
3. Remove 3 connectors (CS701, CS702, CS703).
4. Remove 4 screws (❶~❹).



5. Connect the 3 extension cables.
6. Connect the operation P.C.B.



6. Detach the CD P.C.B. as shown in the figure.



7. Remove the disc clamper by following the disassembly instructions in Ref. No. 20 in the Removal of the Disc Holder (See page 12).

■ MEASUREMENTS AND ADJUSTMENTS

<TUNER SECTION>

•ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
•Set power source voltage to 15 V DC. •Set power switch to ON. •Set function switch to TUNER/MW or LW. •Set volume control to center. •Set balance control to center.	•Set tone control to center. •Set XBS control to minimum. •Output of signal generator should be no higher than necessary to obtain an output reading.

■ MW-RF ALIGNMENT (The parts other than the ones listed below are aligned at the factory before they are supplied. Therefore, alignment of those parts is unnecessary when used for replacement.)

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 1.)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	594 kHz	Tune to signal	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	(*1) L5-1 (MW ANT Coil)	Adjust for maximum output. Adjust L5-1 by moving coil along the ferrite core.
"	1,503 kHz	"	"	CT1 (AM ANT Trimmer)	Adjust for maximum output.
(*1) Fix antenna coil with wax after completing alignment.					

■ LW-RF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Refer to Fig. 1.)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	162 kHz	Tune to signal	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	(*2) L5-2 (AM ANT Coil)	Adjust for maximum output. Adjust L5-2 by moving coil along the ferrite core.
"	270 kHz	"	"	CT2 (AM ANT Trimmer)	Adjust for maximum output.
(*2) Fix antenna coil with wax after completing alignment.					

<CASSETTE DECK SECTION>

•ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
•Set power source voltage to 15 V DC. •Set power switch to ON. •Set function switch to TAPE. •Set volume control to center. •Set balance control to center.	•Set tone control to center. •Set XBS control to minimum. •Output of signal generator should be no higher than necessary to obtain an output reading.

•HEAD AZIMUTH ALIGNMENT

TEST TAPE	INDICATOR ELECTRONIC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCFM (8 kHz, −20 dB)	Headphones Jack (32Ω) (Fabricate the plug shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.)	Azimuth Screw (Shown in Fig. 3 and 4.)	maximum output.	1. Playback mode. 2. Adjust for maximum output.

•TAPE SPEED ADJUSTMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCWAT (3 kHz)	Headphones Jack (32Ω) (Fabricate the plug shown in Fig. 2 and then connect the lead wires of the plug to the measuring instrument.	Motor VR (Refer to Fig. 6.)	3000±90 Hz	1. Playback mode. 2. Adjust motor VR, for 3000±90 Hz reading on frequency counter.

•RECORD BIAS CHECK

TEST TAPE	INDICATOR ELECTRONIC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT	SPECIFICATION	REMARKS
Use Metal CrO_2 tape and Normal tape	TP1 ...(+) TP4 ...(−) (Shown in Fig. 7.)	——	Normal...8±1 mV	•Record mode

•ALIGNMENT POINT

•Please refer to Circuit Board and Wiring Connection Diagram for test point locations.

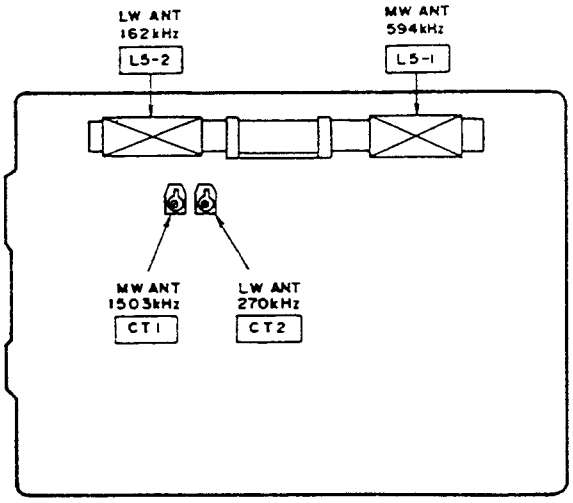


Fig. 1

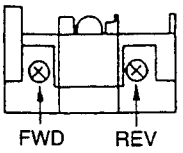


Fig. 3

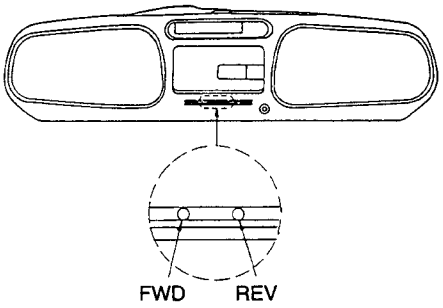


Fig. 4

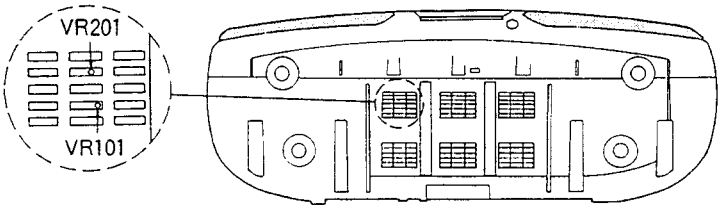


Fig. 5

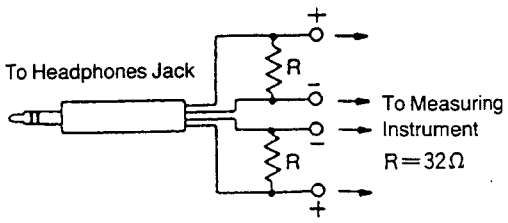


Fig. 2

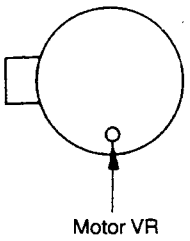
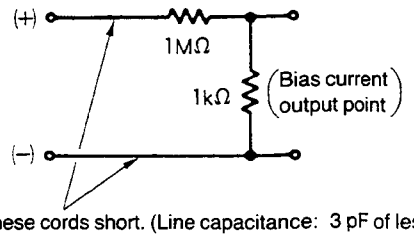


Fig. 6



Keep these cords short. (Line capacitance: 3 pF of less)

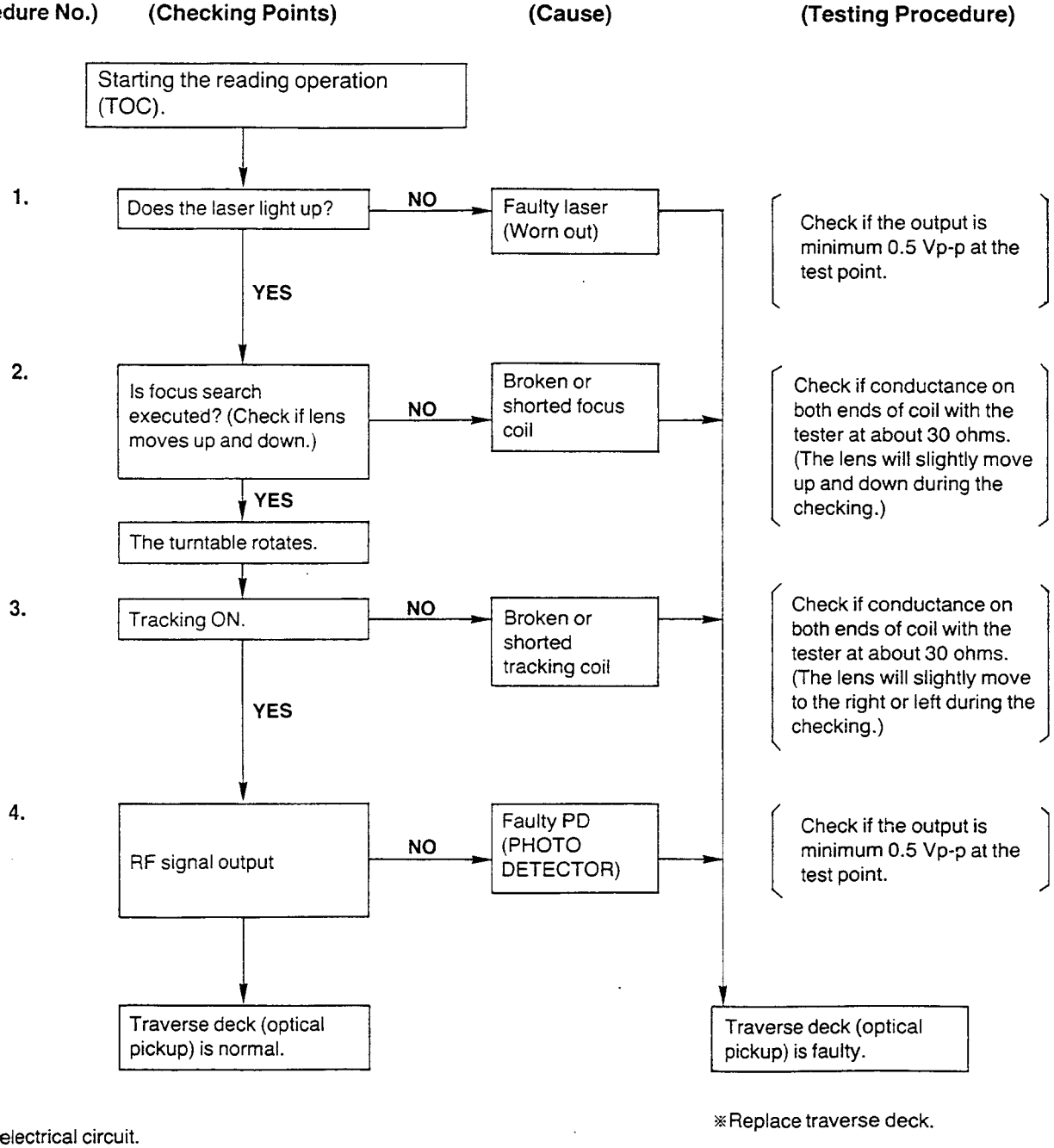
•In order not to influence the bias oscillation, divide the voltage with 1 MΩ and 1 kΩ resistors, and measure the voltage across the 1 kΩ resistor.

Fig. 7

<CD SECTION>

■ CHECKING THE OPERATION PROBLEMS ON THE TRAVERSE DECK (OPTICAL PICKUP)

Make sure to follow the procedures below to check the operation problems of the traverse deck (optical pickup) before replacing it. Replace the traverse deck only after the problem is identified.


(Procedure No.)
(Checking Points)
(Cause)
(Testing Procedure)
Starting the reading operation (TOC).
1.
Does the laser light up?
NO
Faulty laser (Worn out)
Check if the output is minimum 0.5 Vp-p at the test point.
YES
2.
Is focus search executed? (Check if lens moves up and down.)
NO
Broken or shorted focus coil
Check if conductance on both ends of coil with the tester at about 30 ohms. (The lens will slightly move up and down during the checking.)
YES
The turntable rotates.
3.
Tracking ON.
NO
Broken or shorted tracking coil
Check if conductance on both ends of coil with the tester at about 30 ohms. (The lens will slightly move to the right or left during the checking.)
YES
4.
RF signal output
NO
Faulty PD (PHOTO DETECTOR)
Check if the output is minimum 0.5 Vp-p at the test point.
Traverse deck (optical pickup) is normal.
Traverse deck (optical pickup) is faulty.

※Replace traverse deck.

- Check electrical circuit.
- CD is not adjusted properly. Adjust CD again.
  - (1) Mechanical adjustment.
  - (2) Focus balance adjustment (PD balance)
  - (3) Focus gain adjustment.
  - (4) Tracking gain adjustment.
  - (5) Focus offset adjustment.
  - (6) Tracking offset adjustment.
  - (7) Tracking balance adjustment.

  } Refer to pages 41~45
- Check for flaws on disc or if it is warped or not centered.

※Checking Operations of Replaced Traverse Deck (New Traverse Deck)

a) Check the operations described below on the traverse deck after replacing it.

＊Checking Skip Search

1. Play an ordinary musical program disc.
2. Press the skip button to check for normal skip search operation (in both the forward and reverse directions).

＊Checking Manual Search

1. Play an ordinary musical program disc.
2. Press the manual search button to check for smooth manual search operations at either low or high speed (in both the forward and reverse directions).

＊Checking Using Defect Disc.

1. Play the 0.7 mm black dot and the 0.7 mm wedge on the defect test disc (SZZP1054C) and verify that no sound skip or noise occurs.
2. Play the middle tracks of the uneven test disc (SZZP1056C) and verify that no sound skip or noise occurs.

b) If the operations are normal, CD adjustment are not required when the traverse deck is replaced.

Note: CD adjustments are required in the cases below. (Mechanical adjustments are not necessary.)
(See item 2-7 on pp. 41～45.)

- If audio is not played back continuously or noises occur after step (a) is excuted.
- If the adjustment VRs (VR701～VR706) were rotated before the traverse deck was replaced.
- If the ICs in the servo circuit or adjustment VRs were replaced.

Caution:

- It is very dangerous to look at or touch the laser beam. (Laser radiation is invisible.)
  With the unit turned "on", laser radiation is emitted from the pickup lens.
  Avoid exposure to the laser beam, especially when performing adjustments.

Vorsicht:

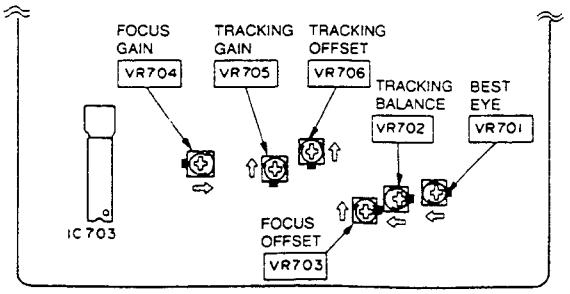
- Vermeiden Sie es, in den Laserstrahl zu blicken oder ihn zu berühren. (Laserstrahlen sind unsichtbar.)
  Bei eingeschaltetem CD-Spieler werden Laserstrahlen aus der Aufnahmelinse abgestrahlt.
  Vermeiden Sie direkte Aussetzung von Laserstrahlen, insbesondere während der Einstellarbeiten.

Measuring Instruments and Special Tools

- Servo gain adjuster (SZZP1017F or SZZP1094C-1)
- Test discs
  1. Playability test disc (SZZP1054C)
  2. Uneven test disc (SZZP1056C)
  3. Black band test disc (SZZP1057C)
- Normal disc
- Dual-beam oscilloscope with bandwidth of 30 MHz or better (with EXT trigger and 1:1 probe).
- Audio frequency (AF) oscillator
- Conversion connector (SZZP1032F)
- 2 mm allen wrench (SZZP1101C)

As to the replacement of the following parts, refer to the specified sections for adjustment.

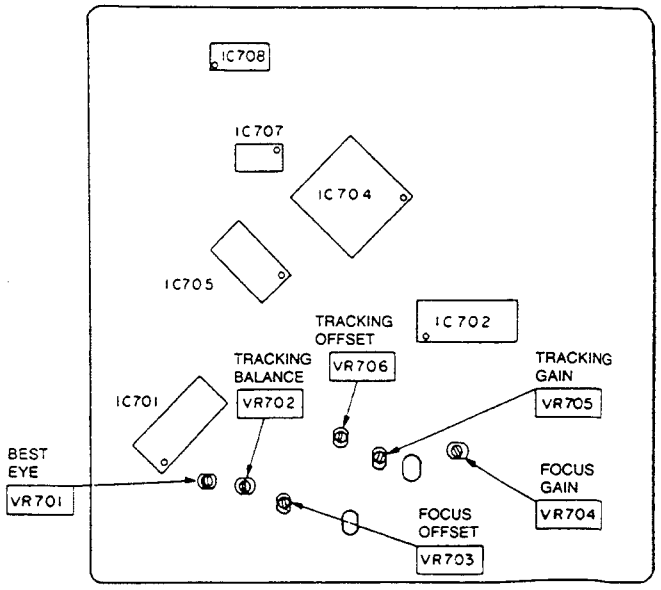
●TEMPORARY SETTING OF EACH VR



Temporary VR setting if any of the trimmer VRs are replaced or require readjustment, temporarily set them to the following positions.

●ALIGNMENT POINT

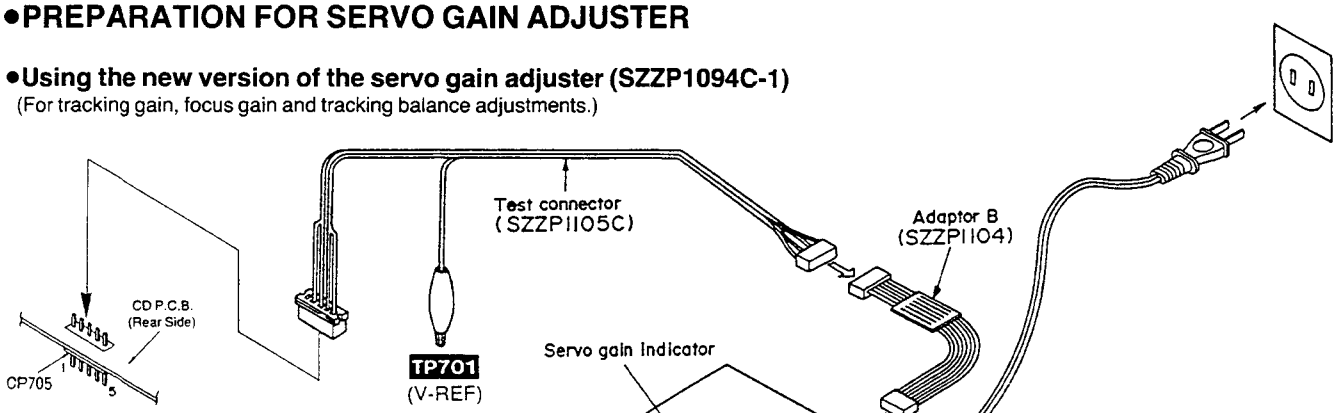
Please refer to Circuit Board and Wiring Connection Diagram for test point locations.



•PREPARATION FOR SERVO GAIN ADJUSTER

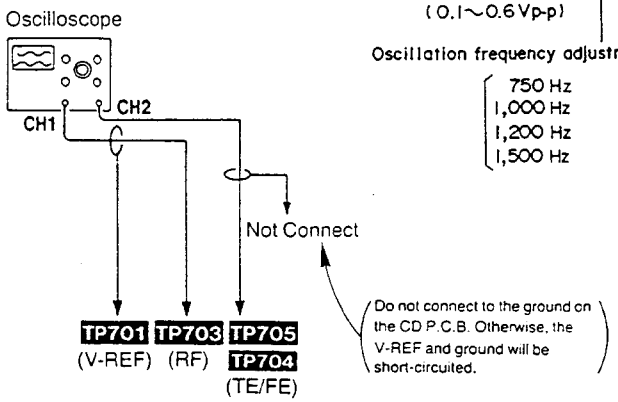
•Using the new version of the servo gain adjuster (SZZP1094C-1)

(For tracking gain, focus gain and tracking balance adjustments.)



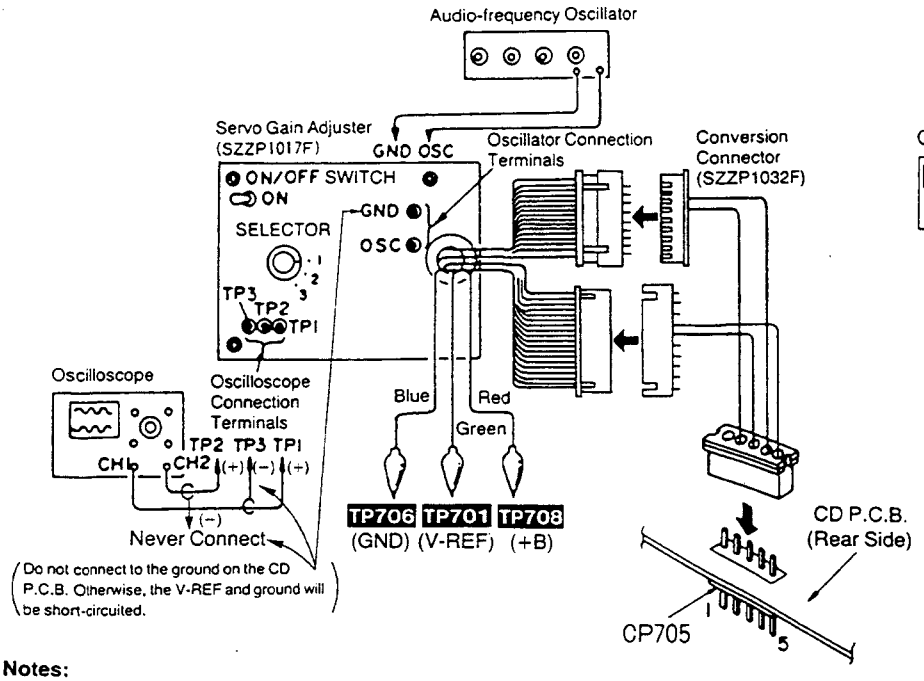
•CONNECTING THE OSCILLOSCOPE

(Mechanical adjustment and adjustment of the best eye, focus offset, tracking offset and tracking balance)



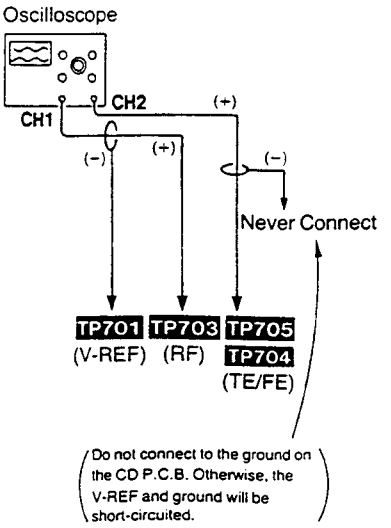
•Using the former version of the servo gain adjuster (SZZP1017F)

(For tracking gain, focus gain and tracking balance adjustments.)



•CONNECTING THE OSCILLOSCOPE

(Mechanical adjustment and adjustment of the best eye, focus offset, tracking offset and tracking balance)

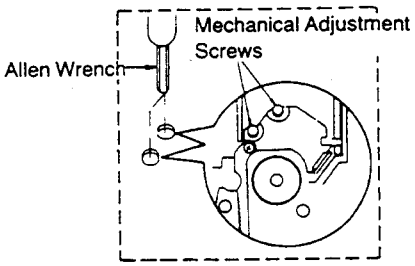


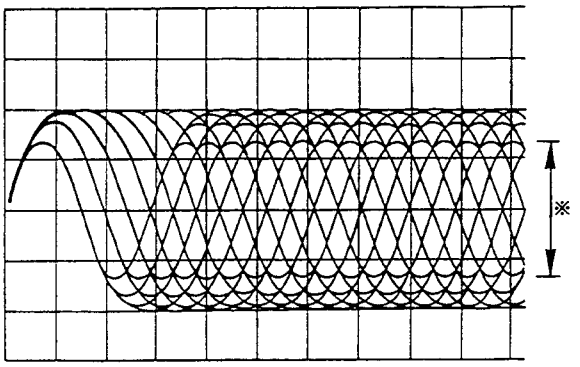
Notes:

1. During adjustment, never connect CH-2 probe's GND to any place for it may short V-REF line. (Connect CH-1 probe's GND to specified TP, described in each section.)
2. TP3 and GND terminal on the SZZP1017F and TP4, chassis of SZZP1017F are all same V-Ref potential.

(1) MECHANICAL ADJUSTMENT

1. Connect the oscilloscope's CH. 1 probe across **TP703** (+) and **TP701** (V-REF) on the Servo P.C.B.
   Oscilloscope setting:
   VOLT ..... 200 mV
   SWEEP ..... 0.5 µsec
   Input coupling ..... AC
2. Switch the player power **ON**, and play track **9** on the test disc (SZZP1056C).
3. Leave the player in Play mode and place it as shown in the figure on the right.
4. Alternately adjust the two mechanical adjusting screws with the 2.0 mm allen wrench (SZZP1101C) until the RF signal amplitude variation on the oscilloscope is minimized.
5. After completing the adjustment, lock the **mechanical adjustments** with lock paint (RZZOL01).

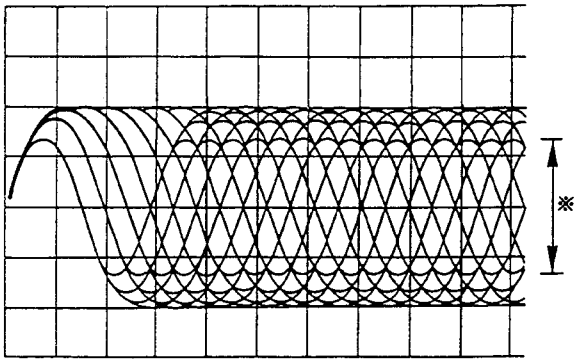




*Minimize the variation of amplitude.

(2) BEST EYE (PD BALANCE) ADJUSTMENT

1. Connect the oscilloscope's CH. 1 probe across **TP703** (+)and **TP701** (−) on the Servo P.C.B.
   Oscilloscope setting:
   VOLT ..... 100 mV
   SWEEP ..... 0.5 µsec
   Input coupling ..... AC
2. Switch the player power **ON**, and play the test disc (SZZP1054C).
3. Adjust **VR701** until the RF signal eye pattern amplitude is maximized.



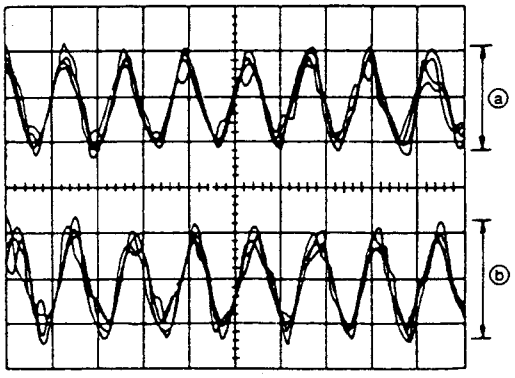
*Maximize the amplitude.

(3) FOCUS GAIN ADJUSTMENT

1. Set the "FREQUENCY" dial of the servo gain adjuster's to **"1,000"** the "RANGE" selector to **"×1"** and the "OSC LEVEL" control to **"0.15" (1 kHz, 150 mVp-p)**.
2. Set the "MODE SELECTOR" to position **"2"**, and the "TRACKING ON/OFF" switch to **"ON"**.
3. Play track **1 (1 kHz)** on the test disc (SZZP1054C).
4. Change the "MODE SELECTOR" switch setting from position **"2"** to **"3"**.
5. Adjust **VR704** until the green "SERVO GAIN" indicator LED comes on to indicate **"GOOD"**.
6. Set the "MODE SELECTOR" switch from position **"3"** back to **"2"**.

   Note: With the new version of the servo gain adjuster, connect TP1, TP2, and TP3 to an oscilloscope, and you will be able to perform all adjustments while monitoring the waveforms on the oscilloscope screen. Adjust **VR704** until the signal amplitude on one channel becomes identical to that on the other, as shown at right. This adjustment procedure also applies with an oscilloscope and audio-frequency oscillator to the former version of the servo gain adjuster.

Oscilloscope setting: VOLT ..... 100 mV (both channels)
SWEEP ..... 1 msec.
Input coupling .. AC

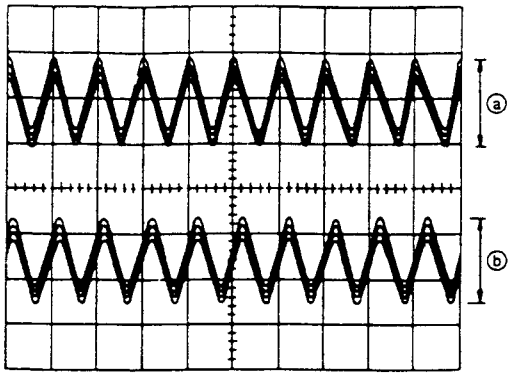


*Adjust **VR704** until ⓐ equals ⓑ.

(4) TRACKING GAIN ADJUSTMENT

1. Set the "FREQUENCY" dial of the servo gain adjuster's to **"1,000"** the "RANGE" selector to **"×1"** and the "OSC LEVEL" control to **"0.15" (1 kHz, 150 mVp-p)**.
2. Play track **1 (1 kHz)** on the test disc (SZZP1054C).
3. Set the "MODE SELECTOR" switch from position **"2"** to **"1"**.
4. Adjust **VR705** until the green "SERVO GAIN" indicator LED comes on to indicate **"GOOD"**.
5. Set the "MODE SELECTOR" switch from position **"1"** back to **"2"**.

Note: When using an oscilloscope for this adjustment, follow the procedure given in the "Note" in (4), "Adjusting Focus Gain" above.

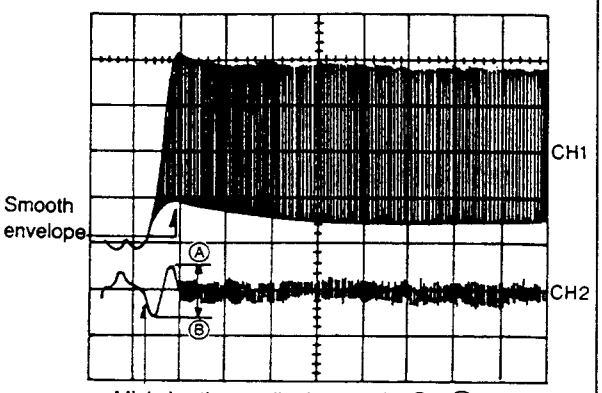


*Adjust **VR705** until ⓐ equals ⓑ.

(5) FOCUS OFFSET ADJUSTMENT

Note: Set the **"MODE SELECTOR"** switch of the Servo Gain Adjuster to position **"2"**.

1. Connect the oscilloscope's CH. 1 probe across **TP703** (+) and **TP701** (V-REF) on the Servo P.C.B. and CH. 2 probe across **TP705** (+) and **TP701** (V-REF).
   Oscilloscope setting:
   VOLT ..... 200 mV (CH. 1)
   1 V (CH. 2)
   SWEEP ..... 1 msec.
   Input coupling ..... AC (both CH. 1 and 2)
   Trigger mode ..... NORM (trigger CH. 1)
2. Switch the player power **ON**, and play the **9** on the test disc (SZZP1057C).
3. Trigger the oscilloscope's CH. 1 so that the following waveforms are observed. Adjust **VR703** until the dip in the RF signal envelope on CH. 1 is smooth and the signal amplitude on CH. 2 is minimized, i.e. when amplitude A equals amplitude B.

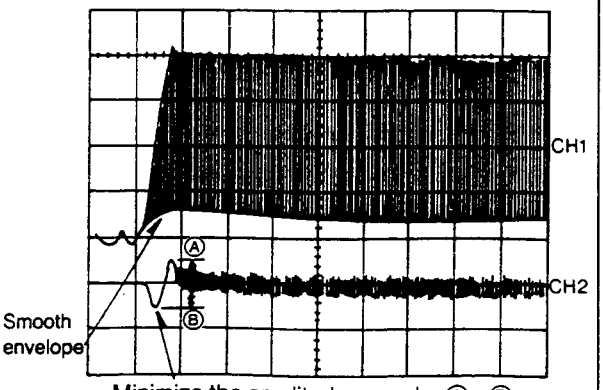


Minimize the amplitude on make Ⓐ=Ⓑ.

(6) TRACKING OFFSET ADJUSTMENT

Note: Set the **"MODE SELECTOR"** switch of the Servo Gain Adjuster to position **"2"**.

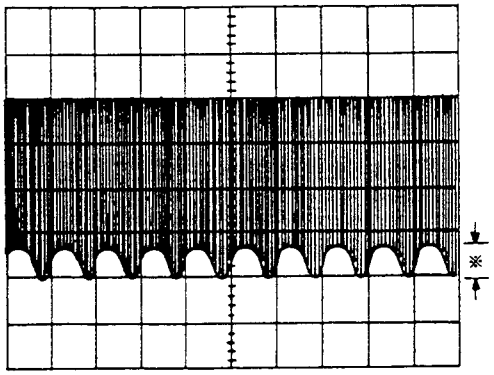
1. Connect the oscilloscope's CH. 1 probe across **TP703** (+) and **TP701** (V-REF) on the Servo P.C.B. and CH. 2 probe across **TP704** (+) and **TP701** (V-REF).
   Oscilloscope setting:
   VOLT ..... 200 mV (CH. 1)
   1 V (CH. 2)
   SWEEP ..... 1 msec.
   Input coupling ..... AC (both CH. 1 and 2)
   Trigger mode ..... NORM (trigger CH. 1)
2. Switch the player power **ON**, and play rack **9** on the test disc (SZZP1057C).
3. Trigger the oscilloscope's CH. 1 so that the following waveforms are observed. Adjust **VR706** until the dip in the RF signal envelope on CH. 1 is smooth and the signal amplitude on CH. 2 is minimized, i.e. when amplitude A equals amplitude B.



Minimize the amplitude on make Ⓐ=Ⓑ.

(7) TRACKING BALANCE ADJUSTMENT

1. Set the "FREQUENCY" dial of the servo gain adjuster's to **"1,000"** the "RANGE" selector to **"×1"** and the "OSC LEVEL" control to **"0.15" (1 kHz, 150 mVp-p)**.
2. Connect the hot lead of the oscilloscope's CH. 1 probe to **TP703** (RF) and the cold lead to **TP701** (V-REF).
   *Connect the hot lead of the oscilloscope's CH. 2 probe to TP1 on the servo gain adjuster.
   Oscilloscope setting:
   VOLT ..... 100 mV (CH. 1)
   SWEEP ..... 1 msec.
   Input coupling ..... AC (both CH. 1 and 2)
   Trigger mode ..... NORM (trigger CH. 2)
3. Play track **1 (1 kHz)** on the test disc (SZZP1054C).
4. Set the "MODE SELECTOR" switch of the servo gain adjuster to position **"1"**.
5. The waveform as shown at right will appear on the oscilloscope. Adjust **VR702** until the envelope amplitude indicated by the asterisk is minimized uniformly.



※This section of the waveform must be balanced.

(8) CHECK OF PLAY OPERATION AFTER ADJUSTMENT

***Checking Skip Search**

1. Play an ordinary musical program disc.
2. Press the skip button to check for normal skip search operation (in both the forward and reverse directions).

***Checking Manual Search**

1. Play an ordinary musical program disc.
2. Press the manual search button to check for smooth manual search operations at either low or high speed (in both the forward and reverse directions).

***Checking Using Defect Disc**

1. Play the 0.7 mm black dot and the 0.7 mm wedge on the defect test disc (SZZP1054C) and verify that no sound skip or noise occurs.
2. Play the middle tracks of the uneven test disc and verify that no sound skip or noise occurs.

■ FUNCTION OF IC TERMINALS

•IC701 (AN8373SE2): Servo amp.

Pin No.	MarK	I/O Division	Function
1	AMP1	I	RF signal input (×30 amp.)
2	PDAD	I	Photo detector current input (A2)
3	PDA	I	Photo detector current input (A1)
4	PDBD	I	Photo detector current input (A4)
5	PDB	I	Photo detector current input (A3)
6	LPD	I	Non-inverting laser power input
7	LD	O	Laser power auto control output
8	FBL1	I	PD balance adjustment
9	FBL2	I	
10	TBL1	I	Tracking balance adjustment
11	TBL2	I	
12	FOOFS	I	Focus offset adjustment
13	IVA	O	Current/voltage conversion output (A)
14	IVB	O	Current/voltage conversion output (B)
15	FE	O	Focus gain adjustment output
16	FPI	I	Focus error signal input
17	TPI	I	Tracking error signal input
18	C. TPL	I	Tracking error filter capacitor input
19	C. TPH		
20	C. FPL	I	Focus error filter capacitor input
21	C. FPH		
22	TPO	O	Tracking error signal output
23	FPO	O	Focus error signal output
24	FGC	I	Focus gain up signal input (Not used, connected to GND)
25	TGC	I	Tracking gain up signal input (Not used, connected to GND)
26	GD	I	Focus/tracking gain down signal input (Not used, connected to GND)
27	PTO	O	Position detecting amp. output
28	PTI	I	Position detecting amp. input
29	PBO	O	Position detecting buffer output
30	POT	I	Position detecting buffer input
31	BDO	O	Dropout detection output
32	$\overline{\text{RFDET}}$	O	RF detections signal output
33	SDO	O	Dropout detection pulse output
34	C. SBDO	I	Dropout detecting capacitor input
35	ARF	O	RF signal output
36	C AGC	I	AGC detecting capacitor input
37	VCC	I	Power supply (+5 V input)
38	LDON	I	Laser power control input
39	RF IN	I	RF signal input
40	AMPO	O	RF signal output
41	VREF	O	Reference voltage output
42	GND	I	Ground terminal

•IC707 (SM5807ESE2): Digital Filter

Pin No.	Mark	I/O Division	Function
1	XT	I	Clock input
2	XT	——	——
3	CKSL	——	——
4	CKO	——	——
5	LRCL	I	Clock (44.1 kHz)
6	DIN	I	Serial data input.
7	BCKIN	I	Serial input, Bit clock input
8	Vss	——	Ground
9	SCSL	I	SCSL=H: System clock=192 fs SCSL=L: System clock=196 fs
10	DGR	O	Degrich signal (Rch) (176.4 kHz)
11	DGL	O	Degrich signal (Lch) (176.4 kHz)
12	DOUT	O	Serial data output
13	WDCK	O	Output control clock (352.8 kHz)
14	LRCO	O	Output control clock (176.4 kHz)
15	BCKO	O	Serial output, Bit clock (8.467 MHz or 8.6436 MHz)
16	Vss	——	+B

•IC702 (AN8374SE2): Servo processor

Pin No.	MarK	I/O Division	Function
1	LSA	I	Phase difference input (A)
2	LSB	I	Phase difference input (B)
3	TEOFS	I	Tracking offset adjustment
4	TE	O	Tracking gain adjustment
5	TEG	I	
6	TE OUT	O	Tracking error signal output
7	TE BPF	I	Tracking error gain detecting filter (Not used, open)
8	FEG	I	Focus gain adjustment
9	FE OUT	O	Focus error signal output
10	CLW	O	Triangular wave oscillator capacitor input
11	VREF	I	Reference voltage input
12	ARF	I	RF signal input
13	CDSL	I	Data slice filter capacitor input
14	FPC	I	Frequency difference signal input
15	GND	I	Ground terminal
16	C. PLL	I	PLL loop filter constant
17	VSS	I	Ground terminal
18	CLK	I	Frequency pull-in clock signal (88.2 kHz) input
19	SRF	O	Sliced and digitized RF signal output
20	PCK	O	Clock output extracted from SRF
21	EFM	O	EFM signal output synchronous with PCK
22	VDD	I	Power supply (+5 V input)
23	SPCNT	O	Track crossing speed control output (Not used, open)
24	SENSE	O	Selector output (track crossing state)
25	TRV	O	Traverse servo control output
26	$\overline{\text{FLOCK}}$	O	Focus lock signal output
27	KICK	O	Track kick signal output
28	LDON	O	Laser power control output
29	VDET	O	Focus/tracking gain up output (Not used, open)
30	CNT1	I	Control input (FOON: Focus servo ON signal)
31	CNT2	I	Control input (TRON: Tracking servo ON signal)
32	CNT3	I	Control input [KICKF: Kick direction (forward) command]
33	CNT4	I	Control input [KICKR: Kick direction (reverse) command]
34	TRVF	I	Traverse forward command signal
35	TRVR	I	Traverse backward command signal
36	$\overline{\text{RFDET}}$	I	RF detection signal input
37	BDO	I	Dropout detection input
38	VCC	I	Power supply (+5 V input)
39	TVPO	O	Traverse position detecting resistor/ capacitor inputs
40	TVPI	O	
41	BROUT	I	Tracking drive control output
42	BRIN	I	Tracking error signal input

•IC703 (AN8377N): BTL drive

Pin No.	MarK	I/O Division	Function
1	PVCC	I	Driver power supply (+8.9 input)
2	VCC	I	Power supply (+8.9 V input)
3	TB	O	External transistor base driving output
4	VMON	O	Voltage output
5	TVDI	I	Traverse error signal input
6	FDI	I	Focus error signal input
7	TDI	I	Tracking error signal input
8	VREF	I	Reference voltage input
9	TD−	O	Inverting output of tracking driver
10	TD+	O	Non-inverting output of tracking driver
11	FD−	O	Inverting output of focus driver
12	FD+	O	Non-inverting output of focus driver
13	TVD−	O	Inverting output of traverse driver
14	TVD+	O	Non-inverting output of traverse driver
15	$\overline{\text{RESET}}$	O	Reset signal output
16	PC	I	PC input (connect to GND)

•IC704 (MN6625): Digital signal processing

Pin No.	MarK	I/O Division	Function
1	BYTCK	O	Serial data byte clock (Not use, open)
2	LCLK	O	Crystal frame clock (Not use, open)
3	DEMPH	O	De-emphasis ON signal (de-emphasis ON at "H") (Not used, open)
4	SRDATA	O	Serial data output (MSB first)
5	SCK	O	Serial bit clock output
6	LRCK	O	LR discrimination signal output
7	WDCK	O	Serial data output word clock
8	LDG	O	L channel deglitch signal (Not used, open)
9	RDG	O	R channel deglitch signal (Not used, open)
10	IPFLAG	O	Interpolation flag (Interpolation at "H")
11	FLAG	O	Error flag terminal
12	XCK	O	Clock (16.9344 MHz) output (Not used, open)
13	TEST	I	Test mode selection (Not used, connected to +5 V)
14	TX	O	Digital signal output
15	SLEEP	I	Mode selector ("L": normal, "H": SLEEP mode)
16	CSEL	I	Test terminal ("L": normal)
17	X1	I	Clock input (16.9344 MHz)
18	X2	O	Clock output (16.9344 MHz) (Not used, open)
19	VSS	I	GND terminal
20	BLKCK	O	Sub-code block (Q data) clock (75 Hz)
21	$\overline{\text{CLDCK}}$	O	Sub-code frame (Q data) clock (7.35 kHz)
22	$\overline{\text{SUBQ}}$	O	Sub-code (Q data) output
23	$\overline{\text{RST}}$	I	Reset signal input (reset at "L")
24	MLD	I	Command load signal input
25	MCLK	I	Command clock signal input
26	MDATA	I	Command data input
27	DMUTE	I	Muting control
28	$\overline{\text{TRON}}$	I	Tracking servo ON signal (tracking servo ON at "L")
29	STAT	O	Processing condition (CRC, CUE, CLVS, TT STOP, FCLV)
30	SUBC	O	Sub-code serial output data (Not used, open)
31	SBCK	I	Clock for sub-code serial output (Not used, open)
32	SMCK	O	Clock output (4.2336 MHz)
33	VDD	I	Power supply (connected to +5 V)
34	MEMP	I	Emphasis signal input
35	FG	I	Spindle motor FG signal input (Not used, open)
36	PC	O	Spindle motor ON signal (ON at "L")
37	EC	O	Spindle motor drive signal
38	RESY	O	Resynchronizing signal (Not used, open)
39	DO	I	Drop-out signal (Drop-out at "H")
40	SRF	I	EFM signal input (DSL)
41	EFM	I	EFM signal input (PLL)
42	PCK	I	PLL extract clock input (4.3218 MHz)
43	FPC	O	PLL frequency comparison signal
44 ~ 51	D7 ~ D0	I/O	16 K RAM data input/output
52	RAM/OE	O	16 K RAM OE signal
53	RAM/WE	O	16 K RAM WE signal
54 ~ 64	RAM/A0 ~ RAM/A10	O	16 K RAM address signal (RAMA0: LSB, RAMA10: MSB)

•IC705 (LC3517BMLTP): De Interleave

Pin No.	Mark	I/O Division	Function
1~8	A7~A0	I	Address input
9~11	D0~D2	I/O	Data in • out
12	VSS	——	Ground Connection
13~17	D3~D7	I/O	Data in • out
18	CS	——	Ground connection
19	A10	I	Address input
20	OE	I	Output-enable input
21	WE	I	Read-wright control input
22	A9	I	Address input
23	A8		
24	V_{DD}	I	Power supply

•IC708 (UPD6376GSE2): D/A Converter

Pin No.	Mark	I/O Division	Function
1	NC	——	——
2	D. GND	——	Ground (DC)
3	D. V_{DD}	I	+B (DC)
4	D. V_{DD}		
5	A. GND	——	Ground (AC)
6	R. OUT	O	AF signal output (Rch)
7	A. V_{CC}	I	+B (AC)
8	A. V_{CC}		

Pin No.	Mark	I/O Division	Function
9	R. REF	I	Reference voltage input (Rch)
10	L. REF	I	Reference voltage input (Lch)
11	L. OUT	O	AF signal output (Lch)
12	A. GND	——	Ground (AC)
13	LRCK	I	Clock input
14	LRSEL	I	Ground
15	SI	I	Serial data input
16	CLK	I	Bit clock input

•IC801 (MN1871610RRX)

Pin No.	Mark	I/O Division	Function
1	VDD	I	+5 V
2	OSC1	O	Clock output (4 MHz)
3	OSC2	I	Clock input (4 MHz)
4	VSS	—	GND
5	XI	I	Clock input (32 kHz)
6	XO	O	Clock output (32 kHz)
7	VREF−	—	Reference voltage (GND)
8	ADIN7	I	Mechanism mode detect
9	ADIN6	I	Mechanism mode detect
10	ADIN5	—	——
11	ADIN4	I	Level meter signal input
12	ADIN3	I	Stereo tuning signal input
13	ADIN2	I	Deck operation signal input
14	ADIN1	I	CD operation signal input
15	ADIN0	I	Selector and timer signal input
16	VREF+	—	Reference voltage (+5 V)
17	S/M	—	——
18	M/ST	O	FM mode select signal output L: STEREO H: MONO
19	BEEP	O	Beep signal output
20	PLL CL	O	PLL control signal output
21	PLL DI		
22	PLL CE		
23	MANUAL	—	——
24	AGCLK	O	AF signal control
25	AGCDATA		
26	RWR CONT	O	Power control
27	MUTE A	O	Muting control
28	MATT H	—	——
29	ATT0	O	ATLS position
30	ATT1		
31	IRQ1	I	Remote sensor signal input
32	BLKCK	I	CD sub code clock input
33	STATUS	I	CD status signal input
34	SENSE	I	CD sense signal input
35	RST	I	Reset signal input
36	XBS OFF	—	——

ATLS position

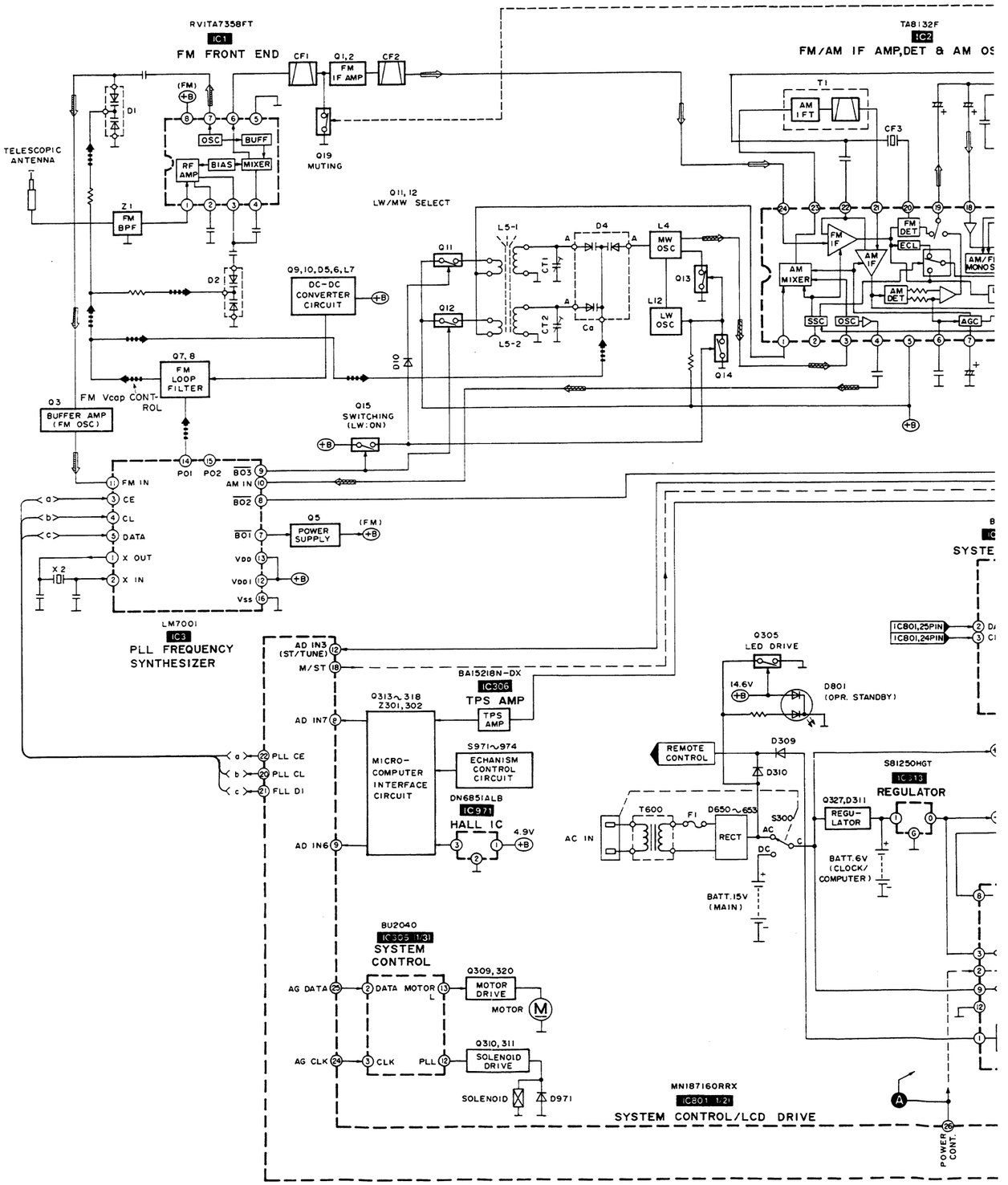
Pin No.	+3 dB	0 dB	−3 dB	−6 dB
29	L	H	L	H
30	L	L	H	H

Pin No.	Mark	I/O Division	Function
37	VOL UP	O	Motor (for volume) control
38	VOL DOWN		
39	CLDCK	I	CD sub code clock input
40	SUBQ	I	CD sub code data input
41	SBO0	—	——
42	SYNC	—	——
43	CM	—	——
44	POWER	O	Power control signal output
45	D MUTE	O	CD muting control signal output
46	TRVR	O	Traverse "REV" command signal output
47	TRVF	O	Traverse "FWD" command signal output
48 ~ 51	CNT4 ~ CNT1	O	Optical servo IC control output
52	FLOCK	I	Optical servo focus lock input
53	REST	I	Reset switch (S701) signal input
54	CD CLOSE	I	CD cover open/close detection signal input L...Close H...Open
55	REM.STBY	O	Remote control sensor power control
56	POWER DET	I	Power supply circuit operation input
57	AGC	—	——
58	VOL LIMIT	—	——
59	2 BAND L	—	——
60	MLD	O	CD signal process IC control output
61	MDATA		
62	MCLK		
63	P54	——	——
64 ~ 93	SEG29 ~ SEG0	O	LCD segment signal output
94 ~ 97	COM3 ~ COM0	O	LCD common signal output
98	VLC3	I	LCD bias reference voltage V3
99	VLC2	I	LCD bias reference voltage V2
100	VLC1	I	LCD bias reference voltage V1

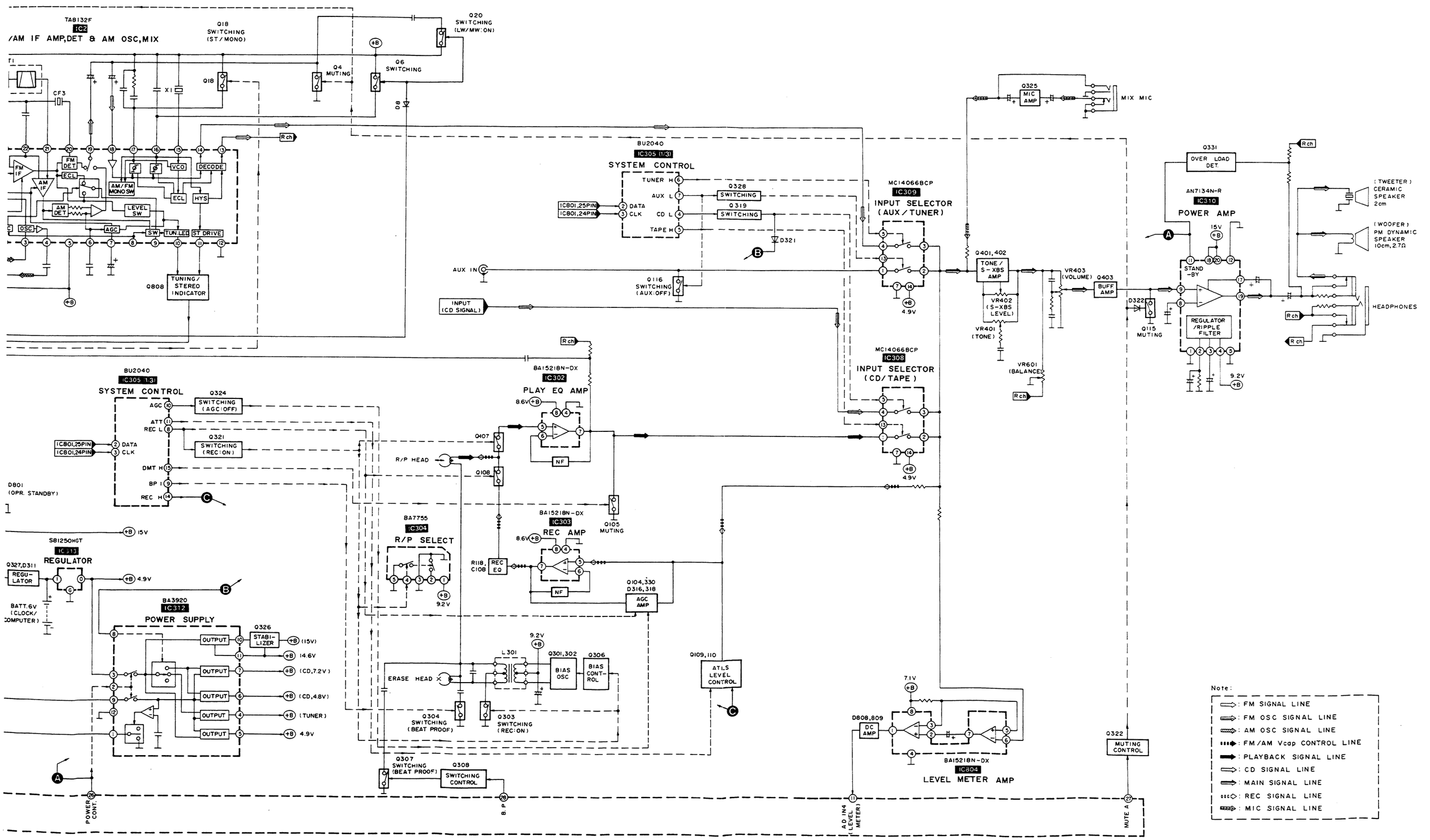
Motor (for volume) control

Pin No.	Vol. Up	Vol. Down
37	H	L
38	L	H

■ BLOCK DIAGRAM •TUNER/AF/SYSTEM CONTROL/POWER SUPPLY CIRCUIT



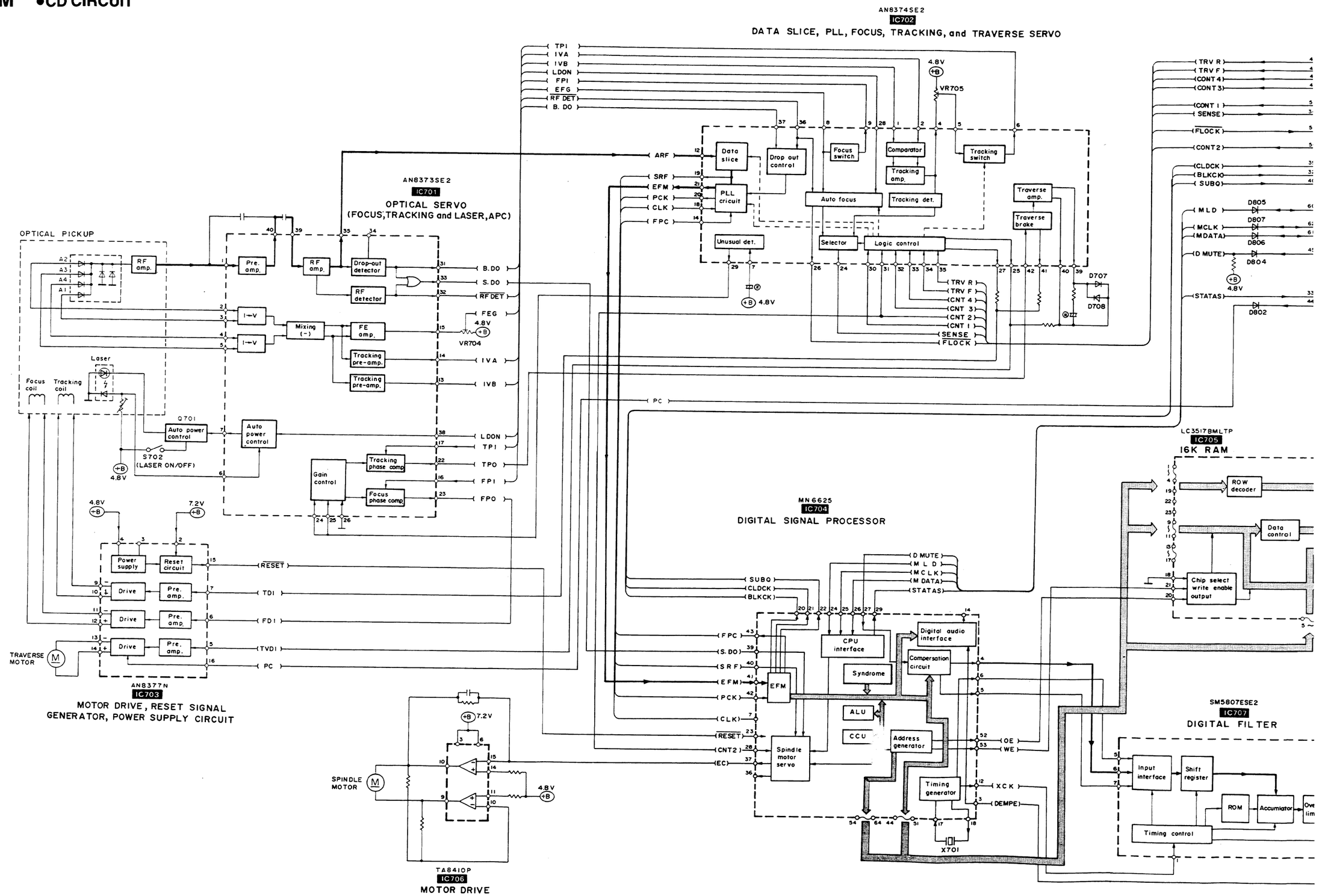
'CIRCUIT



Note:

- FM SIGNAL LINE
- FM OSC SIGNAL LINE
- AM OSC SIGNAL LINE
- FM/AM Vcap CONTROL LINE
- PLAYBACK SIGNAL LINE
- CD SIGNAL LINE
- MAIN SIGNAL LINE
- REC SIGNAL LINE
- MIC SIGNAL LINE

■ BLOCK DIAGRAM •CD CIRCUIT



MN187161ORRX
IC801
SYSTEM CONTROL/LCD DRIVE

(TRV R) 46 TRV.R
(TRV F) 47 TRV.F
(CONT 4) 48 CONT 4
(CONT 3) 49 CONT 3
(CONT 1) 51 CONT 1
(SENSE) 34 SENSE
(FLOCK) 52 FLOCK
(CONT 2) 50 CONT 2
(CLDCK) 39 CLDCK
(BLKCK) 32 BLKCK
(SUBQ) 40 SUBQ
(MLD) D805 60 MLD
(MCLK) D807 62 MCLK
(MDATA) D806 61 MDATA
(D MUTE) D804 45 DMUTE
+B 4.8V
(STATAS) 33 STATAS
D802 44 POWER

REST 53
BEEP 19
RST 35
OSC1 2
OSC2 3
XO 6
XI 5
POWER DET. 56
REMOCOM STANDBY 55
IRQ1 31

S701 (REST)
+B 4.8V
Q801 Buff. amp. (beep)
CF800
CF802
CF801
Q804 Power down detector

SEG 29 64
SEG 0 93
Z801 LCD DISPLAY
COM 3 94
COM 2 95
COM 1 96
COM 0 97

S800~820,822,823,825~832,834,835
ADIN 2 13
ADIN 1 14
ADIN 0 15
KEY MATRIX

VOLUME UP 37
VOLUME DOWN 38
CD CLOSE SW 54
+B 4.8V
S836 (CD OPEN/CLOSE)

LC35178MLTP
IC705
16K RAM
ROW decoder
Memory array
Data control
Column I/O
Column data
Chip select write enable output
5 ~ 8

PST572H2TA
IC801
RESET SIGNAL GENERATOR
Compa-rator
Reference voltage
Output circuit
Level conv.
3
1
4.8V +B
2

Z800 Remote control receiver
Q802, Q803
Power supply
+B
REMOTE CONT.

BA6418N
IC805
MOTOR DRIVE
Logic
Pre amp.
Drive
5.5V +B
6
2
5
8
3
1
7
9
M
MOTOR (VR403: VOLUME CONTROL)

SM5807ESE2
IC707
DIGITAL FILTER
Shift register
ROM
Accumulator
Over flow limitter
Output interface
12
13
14
15
Input register
Selector
Timing control
Latch
PWM
Buff amp.
Latch
RWM
Buff amp.
11
16
10

UPD6376GSE2
IC708
D/A CONVERTER, BUFFER AMP
(CS701)
7 GND
6 L ch
5 GND
4 R ch
3 GND
2 + B
1 + B
Q705 Switching (De-emphasis)
7.2V +B
4.8V +B
Q704 Switching (De-emphasis)
Q703 Switching control

Ref. No.	Part No.	Part Name & Description	Remarks
D101, 102	MA165	DIODE	
D201, 202	MA165	DIODE	
D301	MA165	DIODE	
D302	RVDMTZ4R7BTA	DIODE	
D303	MA165	DIODE	
D309, 310	MA165	DIODE	
D311	MA4100LTA	DIODE	
D312	MA723TA	DIODE	
D313	RVDMTZ6R8BTA	DIODE	
D315, 316	MA165	DIODE	
D318	MA165	DIODE	
D320	MA700TA	DIODE	
D321-323	MA165	DIODE	
D324	RVDMTZ6R8BTA	DIODE	
D650-653	RVDP300DLF	DIODE	
D707	MA165TA	DIODE	
D708	MA165TA	DIODE	
D800	MA700TA	DIODE	
D801	LN021529P	LED	
D802-807	MA165	DIODE	
D808, 809	MA700TA	DIODE	
D810	MA4160M	DIODE	
		VARIABLE RESISTOR(S)	
VR401	EWAGQ5W06G54	V. R, TONE (VR501)	
VR402	EWAGS5W06D54	V. R, S-XBS (VR502)	
VR403	EWC08A027B54	V. R, VOLUME (VR503)	
VR601	EWAGU5W06G15	V. R, BALANCE	
VR701	EVNDXAA00B14	V. R, BEST EYE.	
VR702	EVNDXAA00B24	V. R, TRACKING BAL.	
VR703	EVNDXAA00B14	V. R, FOCUS OFFSET.	
VR704	EVNDXAA00B14	V. R, FOCUS GAIN.	
VR705	EVNDXAA00B14	V. R, TRACKING GAIN.	
VR706	EVNDXAA00B14	V. R, TRACKING OFFSET.	
		COMPONENT COMBINATION(S)	
Z1	RXABPWB6A	COMPONENT COMBINATION	
Z301, 302	EXBF6L306SYV	COMPONENT COMBINATION	
Z800	RCD0002	COMPONENT COMBINATION	
Z801	RSL5040-L	LCD	
		COIL(S)	
L3	RLQZP4R7KT-Y	COIL	
L4	RL02B001-T	COIL	
L5	RLV6C001-0	COIL	
L7	RL09B18-M	COIL	
L8, 9	RLQZP221KT-Y	COIL	
L12	RL01B001-T	COIL	
L15	RLQZP221KT-Y	COIL	

Ref. No.	Part No.	Part Name & Description	Remarks
L17	RLQZP4R7KT-Y	COIL	
L301	RL08C7-T	COIL	
L303	RLQZB470KT-D	COIL	
L800, 801	RLL500050T-Y	COIL	
L802	ELEXT2R2KA9	COIL	
L804	ELEXT2R2KA9	COIL	
L806	ELEXT2R2KA9	COIL	
L808	ELEXT2R2KA9	COIL	
L810	ELEXT2R2KA9	COIL	
L813-820	ELEXT2R2KA9	COIL	
		TRANSFORMER(S)	
T1	RLI2B001-T	TRANSFORMER	
T600 ⚠	RTP1L1E003	POWER TRANSFORMER	
		FUSE	
F1 ⚠	XBA2C31TB0U	FUSE	
		FILTER(S)	
CF1, 2	RLFFETMLA02D	CERAMIC FILTER	
CF3	RLFDFTA01D	CERAMIC FILTER	
CF800	RAT0005	CERAMIC FILTER	
CF801	RSXD32K7F02	CERAMIC FILTER	
CF802	RVBCSA3R9MGT	CERAMIC FILTER	
		OSCILLATOR(S)	
X1	RSXZ456KM01	OSCILLATOR	
X2	RSXC7M20S03	OSCILLATOR	
X701	RSXZ16M9M01T	OSCILLATOR	
		SWITCH(ES)	
S300 ⚠	RJJ1SE01-H	SW, AC/DC SELECT(JK901)	
S701	SSHD5-E	SW, RESET	
S702	SSHD5	SW, LASE ON/OFF	
S800	EVQ21409K	SW, TAPE STOP	
S801	EVQ21409K	SW, CD P. B/STOP	
S802	EVQ21409K	SW, POWER	
S803	EVQ21409K	SW, TAPE FAST/TPS	
S804	EVQ21409K	SW, CD PAUSE	
S805	EVQ21409K	SW, SLEEP	
S806	EVQ21409K	SW, TAPE REVERSE P. B	
S807	EVQ21409K	SW, CD SKIP/SEARCH	
S808	EVQ21409K	SW, TAPE AUX	
S809	EVQ21409K	SW, TAPE FOWERD P. B	
S810	EVQ21409K	SW, CD SKIP/SEARCH	
S811	EVQ21409K	SW, TUBER BAND	
S812	EVQ21409K	SW, TAPE FAST/TPS	

■ REPLACEMENT PARTS LIST

Notes : • Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
• The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT (S)	
IC1	RVITA7358FT	I. C, FM FRONT END	
IC2	TA8132F	I. C, IF AMP. DET	
IC3	LM7001	I. C, PLL	
IC302, 303	BA15218N-DX	I. C, PLAY EQ AMP	
IC304	BA7755	I. C, R/P SELECT	
IC305	BU2040	I. C, SYSTEM CONTROL	
IC306	BA15218N-DX	I. C, TPS AMP	
IC308, 309	MC14066BCP	I. C, DOLBY NR	
IC310	AN7134N-R	I. C, POWER AMP	
IC312	BA3920	I. C, POWER SUPPLY	
IC313	S81250HGT	I. C, REGULATOR	
IC701	AN8373SE2	I. C, CD SERVO SYSTEM	
IC702	AN8374SE2	I. C, PWM DRIVE/PLL	
IC703	AN8377N	I. C, MOTOR DRIVE	
IC704	MN6625	I. C, SIGNAL PROCESS	
IC705	LC3517BML TP	I. C, DE INTER LEAVE	
IC706	TA8410P	I. C, MOTOR DRIVE	
IC707	SM5807ESE2	I. C, DIGITAL FILTER	
IC708	UPD6376GSE2	I. C, SWITCHING	
IC800	PST572H2TA	I. C, RESET SIG. GEN	
IC801	MN1871610RRX	I. C, SYSTEM CONTROL	
IC804	BA15218N-DX	I. C, LEVEL METER AMP	
IC805	BA6418N	I. C, MOTOR DRIVE	
		TRANSISTOR (S)	
Q1	2SC3313B	TRANSISTOR	
Q2	2SC3313B	TRANSISTOR	
Q3	2SC1674LTA	TRANSISTOR	
Q4	2SC3311R	TRANSISTOR	
Q5, 6	RVTDTA143XST	TRANSISTOR	
Q7-9	2SC3311R	TRANSISTOR	
Q10	2SC3311R	TRANSISTOR	
Q11, 12	2SA1309R	TRANSISTOR	
Q13, 14	2SC3311R	TRANSISTOR	
Q15	RVTDTA143XST	TRANSISTOR	
Q18	2SK381CTA	TRANSISTOR	
Q19	RVTDTC114TST	TRANSISTOR	
Q20	RVTDTA143XST	TRANSISTOR	
Q104	KSC2785GTA	TRANSISTOR	
Q105	2SD1450RTA	TRANSISTOR	
Q107, 108	2SJ164QTA	TRANSISTOR	
Q109, 110	KSC2785GTA	TRANSISTOR	
Q115, 116	KSC2785GTA	TRANSISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
Q204	KSC2785GTA	TRANSISTOR	
Q205	2SD1450RTA	TRANSISTOR	
Q207, 208	2SJ164QTA	TRANSISTOR	
Q209, 210	KSC2785GTA	TRANSISTOR	
Q215, 216	KSC2785GTA	TRANSISTOR	
Q301, 302	2SD1302STA	TRANSISTOR	
Q303	2SD1450RTA	TRANSISTOR	
Q304	KSC2785GTA	TRANSISTOR	
Q305	UN421FTA	TRANSISTOR	
Q306, 307	KSC2785GTA	TRANSISTOR	
Q308	UN411FTA	TRANSISTOR	
Q309	2SD965Q	TRANSISTOR	
Q310	KSB564ACYTA	TRANSISTOR	
Q311	UN4216-S	TRANSISTOR	
Q313, 314	KSC2785GTA	TRANSISTOR	
Q315	UN4217TA	TRANSISTOR	
Q316-319	KSC2785GTA	TRANSISTOR	
Q320, 321	UN411FTA	TRANSISTOR	
Q322	UN4216-S	TRANSISTOR	
Q324	KSC2785GTA	TRANSISTOR	
Q325	2SC3312RTA	TRANSISTOR	
Q326	2SB1393AU	TRANSISTOR	
Q327	2SC1684RTA	TRANSISTOR	
Q328	UN4216-S	TRANSISTOR	
Q330, 331	KSC2785GTA	TRANSISTOR	
Q401-403	2SC3312RTA	TRANSISTOR	
Q501-503	2SC3312RTA	TRANSISTOR	
Q701	2SA1309STA	TRANSISTOR	
Q703	UN4110TA	TRANSISTOR	
Q704	UN4216TA	TRANSISTOR	
Q705	UN4216TA	TRANSISTOR	
Q801	2SC3311AR	TRANSISTOR	
Q802	UN421FTA	TRANSISTOR	
Q803	UN411FTA	TRANSISTOR	
Q804	2SC3311AR	TRANSISTOR	
Q808	UN4115	TRANSISTOR	
		DIODE (S)	
D1	1SV147T4MATU	DIODE	
D2	1SV147T4MATU	DIODE	
D3	MA4051MTA	DIODE	
D4	RVDKV1235Z2	DIODE	
D5	MA4130M	DIODE	
D6	MA165	DIODE	
D8, 9	MA165	DIODE	
D10	MA165	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
S813	EVQ21409K	SW, TAPE LENGTH	
S814	EVQ21409K	SW, CD	
S815	EVQ21409K	SW, REC PAUSE	
S816	EVQ21409K	SW, AUTO EDIT	
S817	EVQ21409K	SW, BEEP ON/OFF	
S818	EVQ21409K	SW, REVERSE MODE	
S819	EVQ21409K	SW, ATLS	
S820	EVQ21409K	SW, TIMER	
S822	EVQ21409K	SW, FIT	
S823	EVQ21409K	SW, TIMER REC	
S825	EVQ21409K	SW, TUNING MEMORY	
S826	EVQ21409K	SW, TIMER CHECK	
S827	EVQ21409K	SW, COUNTER RESET	
S828	EVQ21409K	SW, CANCEL	
S829	EVQ21409K	SW, TIMER ADJUST	
S830	EVQ21409K	SW, FM MODE B. P.	
S831	EVQ21409K	SW, PRESET TUNING +	
S832	EVQ21409K	SW, MANUAL TUNING -	
S834	EVQ21409K	SW, PRESET TUNING -	
S835	EVQ21409K	SW, MANUAL TUNING +	
S836	RSH1A90ZA-U	SW, CD COVER OPEN/CLOSE	
S971	RSH1A89Z	SW, DECK MODE	
S972	RSH1A90YB-U	SW, DECK TAPE DETECT	
S973	RSH1A90YB-U	SW, DECK TAB DET. (REV)	
S974	RSH1A90YB-U	SW, DECK TAB DET. (FWD)	
		CONNECTOR	
CM301	RJP3G9YA	CONNECTOR	
CM308	RJP2G9YA	CONNECTOR	
CM801	SJSD1205	SOCKET	
CM802	SJSD1105	SOCKET	
CM803	RJS7T4ZA	SOCKET	
CM804	RJS5T4ZA	SOCKET	
CP1	RJP8G18ZA	CONNECTOR	
CP301	RJP5G18ZA	CONNECTOR	
CP302	RJP2G18ZA	CONNECTOR	
CP303	RJP4G9YA	CONNECTOR	
CP701	RJP2G18ZA	PLUG	
CP702	RJP2G18ZA	PLUG	
CP703	RJP2G18ZA	PLUG	
CP704	RJP2G17ZA	CONNECTOR	
CP705	RJP5G35ZA	PLUG	
CP801	RJT005W007	CONNECTOR	
CP802, 803	RJT005W010	CONNECTOR	
CS2	RJS1A5207	SOCKET	
CS701	RJU005W007	SOCKET	
CS702	RJU005W010	SOCKET	
CS703	RJU005W010	SOCKET	
CS705	RJS16Q11ZA	SOCKET	
		TRIMER	

Ref. No.	Part No.	Part Name & Description	Remarks
CT1	RCV10AF1T-S	TRIMMER CAPACITOR	
CT2	ECRLA020E53R	VARIABLE CAPACITOR	
		IC PROTECTOR	
IP301-303	RAHICPN5TA	IC PROTECTOR	
IP304	RAHICPN15TA	IC PROTECTOR	
IP305	RAHICPN5TA	IC PROTECTOR	
		JACK	
JK301	RJJ1D25ZA-C	JACK, MIX MIC	
JK302	RJF1099ZA	JACK, AUX IN	
JK303	RJJD7S2YA-C	JACK, HEADPHONES	
JK901 ⚠	RJJ1SE01-H	JACK, AC IN (S300)	

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R1	ERDS2TJ104	1/4W 100K
R2	ERDS2TJ104	1/4W 100K
R3	ERDS2TJ104	1/4W 100K
R4	ERDS2TJ470	1/4W 47
R5	ERDS2TJ151	1/4W 150
R6	ERDS2TJ331	1/4W 330
R7	ERDS2TJ391	1/4W 390
R8	ERDS2TJ274	1/4W 270K
R9	ERDS2TJ105T	1/4W 1M
R10	ERDS2TJ561	1/4W 560
R11	ERDS2TJ330	1/4W 33
R12	ERDS2TJ104	1/4W 100K
R13	ERDS2TJ470	1/4W 47
R15	ERDS2TJ391	1/4W 390
R16	ERDS2TJ683	1/4W 68K
R17	ERDS2TJ104	1/4W 100K
R18	ERDS2TJ103	1/4W 10K
R20	ERDS2TJ332	1/4W 3.3K
R21	ERDS2TJ562	1/4W 5.6K
R22	ERDS2TJ473	1/4W 47K
R23	ERDS2TJ102	1/4W 1K
R24	ERDS2TJ223	1/4W 22K
R25	ERDS2TJ103	1/4W 10K
R27	ERDS2TJ151	1/4W 150
R28, 29	ERDS2TJ471	1/4W 470
R30	ERDS2TJ104	1/4W 100K
R31	ERDS2TJ222	1/4W 2.2K
R32	ERDS2TJ473	1/4W 47K
R33-38	ERDS2TJ103	1/4W 10K
R39	ERDS2TJ102	1/4W 1K
R40	ERDS2TJ223	1/4W 22K
R50-52	ERDS2TJ103	1/4W 10K
R55	ERDS2TJ103	1/4W 10K
R56	ERDS2TJ222	1/4W 2.2K
R60	ERDS2TJ104	1/4W 100K
R61	ERDS2TJ332	1/4W 3.3K
R62, 63	ERDS2TJ681	1/4W 680
R71	ERDS2TJ274	1/4W 270K
R101	ERDS2TJ184T	1/4W 180K
R102	ERDS2TJ474	1/4W 470K
R103	ERDS2TJ332	1/4W 3.3K
R105	ERDS2TJ182	1/4W 1.8K
R106	ERDS2TJ272T	1/4W 2.7K
R108	ERDS2TJ183T	1/4W 18K
R109	ERDS2TJ104	1/4W 100K
R110	ERDS2TJ683	1/4W 68K
R111	ERDS2TJ104	1/4W 100K
R112	ERDS2TJ334	1/4W 330K
R113	ERDS2TJ330	1/4W 33
R115	ERDS2TJ332	1/4W 3.3K
R116	ERDS2TJ472	1/4W 4.7K
R117	ERDS2TJ473	1/4W 47K
R118	ERDS2TJ123	1/4W 12K
R119	ERDS2TJ183T	1/4W 18K
R120	ERDS2TJ563	1/4W 56K
R121	ERDS2TJ822	1/4W 8.2K
R123	ERDS2TJ683	1/4W 68K
R124	ERDS2TJ393	1/4W 39K
R125	ERDS2TJ473	1/4W 47K
R126	ERDS2TJ153	1/4W 15K
R127	ERDS2TJ473	1/4W 47K
R128	ERDS2TJ153	1/4W 15K
R130	ERDS2TJ472	1/4W 4.7K
R131	ERDS2TJ101	1/4W 100
R132	ERDS2TJ2R2T	1/4W 2.2
R133	ERDS2TJ181T	1/4W 180
R134	ERDS2TJ821	1/4W 820
R135	ERDS2TJ221	1/4W 220
R141	ERDS2TJ224T	1/4W 220K
R154	ERDS2TJ183T	1/4W 18K
R155	ERDS2TJ333	1/4W 33K
R156	ERDS2TJ474	1/4W 470K
R201	ERDS2TJ184T	1/4W 180K
R202	ERDS2TJ474	1/4W 470K
R203	ERDS2TJ332	1/4W 3.3K
R205	ERDS2TJ182	1/4W 1.8K
R206	ERDS2TJ272T	1/4W 2.7K
R208	ERDS2TJ183T	1/4W 18K
R209	ERDS2TJ104	1/4W 100K
R210	ERDS2TJ683	1/4W 68K
R211	ERDS2TJ104	1/4W 100K
R212	ERDS2TJ334	1/4W 330K
R213	ERDS2TJ330	1/4W 33
R215	ERDS2TJ332	1/4W 3.3K
R216	ERDS2TJ472	1/4W 4.7K
R217	ERDS2TJ473	1/4W 47K
R218	ERDS2TJ123	1/4W 12K
R219	ERDS2TJ183T	1/4W 18K
R220	ERDS2TJ563	1/4W 56K
R221	ERDS2TJ822	1/4W 8.2K
R223	ERDS2TJ683	1/4W 68K
R224	ERDS2TJ393	1/4W 39K
R225	ERDS2TJ473	1/4W 47K
R226	ERDS2TJ153	1/4W 15K
R227	ERDS2TJ473	1/4W 47K
R228	ERDS2TJ153	1/4W 15K
R230	ERDS2TJ472	1/4W 4.7K
R231	ERDS2TJ101	1/4W 100
R232	ERDS2TJ2R2T	1/4W 2.2
R233	ERDS2TJ221	1/4W 220
R234	ERDS2TJ821	1/4W 820
R235	ERDS2TJ221	1/4W 220
R241	ERDS2TJ224T	1/4W 220K
R254	ERDS2TJ183T	1/4W 18K
R255	ERDS2TJ333	1/4W 33K
R256	ERDS2TJ474	1/4W 470K
R301, 302	ERDS2TJ102	1/4W 1K
R304	ERDS2TJ103	1/4W 10K
R305	ERDS2TJ472	1/4W 4.7K
R309	ERDS2TJ123	1/4W 12K
R310	ERDS2TJ4R7T	1/4W 4.7
R311	ERDS2TJ472	1/4W 4.7K
R312	ERDS2TJ392T	1/4W 3.9K
R313	ERDS2TJ2R7T	1/4W 2.7
R314	ERDS2TJ221	1/4W 220
R317	ERDS2TJ2R7T	1/4W 2.7
R318	ERDS2TJ472	1/4W 4.7K
R319	ERDS2TJ102	1/4W 1K
R320	ERDS2TJ473	1/4W 47K
R322-324	ERDS2TJ473	1/4W 47K
R326	ERDS2TJ102	1/4W 1K
R327	ERDS2TJ222	1/4W 2.2K
R328	ERDS2TJ101	1/4W 100
R329, 330	ERDS2TJ104	1/4W 100K
R331, 332	ERDS2TJ103	1/4W 10K
R335	ERDS2TJ274	1/4W 270K
R337	ERDS2TJ393	1/4W 39K
R338-340	ERDS2TJ103	1/4W 10K
R341	ERDS2TJ683	1/4W 68K
R342	ERDS2TJ472	1/4W 4.7K
R343	ERDS2TJ101	1/4W 100
R344	ERDS2TJ122	1/4W 1.2K
R345	ERDS2TJ682T	1/4W 6.8K
R347	ERDS2TJ101	1/4W 100
R348, 349	ERDS2TJ474	1/4W 470K
R350	ERDS2TJ223	1/4W 22K
R351, 352	ERDS2TJ103	1/4W 10K
R353	ERDS2TJ222	1/4W 2.2K
R354	ERDS2TJ103	1/4W 10K
R355	ERDS2TJ332	1/4W 3.3K
R356	ERDS2TJ473	1/4W 47K
R357	ERDS2TJ272T	1/4W 2.7K
R358	ERDS2TJ473	1/4W 47K
R359	ERDS2TJ153	1/4W 15K
R360	ERDS2TJ223	1/4W 22K
R361	ERDS2TJ333	1/4W 33K
R362	ERDS2TJ472	1/4W 4.7K
R363	ERDS2TJ1R5T	1/4W 1.5
R365	ERDS2TJ104	1/4W 100K
R372	ERDS2TJ681	1/4W 680
R373	ERDS2TJ102	1/4W 1K
R374	ERDS2TJ106T	1/4W 10M
R379	ERDS2TJ101	1/4W 100

Ref. No.	Part No.	Values & Remarks
R381	ERDS2TJ102	1/4W 1K
R382	ERDS2TJ180T	1/4W 18
R383	ERDS2TJ334	1/4W 330K
R384	ERDS2TJ393	1/4W 39K
R385-387	ERDS2TJ103	1/4W 10K
R390	ERDS2TJ103	1/4W 10K
R394	ERDS2TJ223	1/4W 22K
R395	ERDS2TJ681	1/4W 680
R396, 397	ERDS2TJ102	1/4W 1K
R399	ERDS2TJ1R5T	1/4W 1.5
R401	ERDS2TJ682T	1/4W 6.8K
R402	ERDS2TJ105T	1/4W 1M
R403	ERDS2TJ152	1/4W 1.5K
R404	ERDS2TJ472	1/4W 4.7K
R405	ERDS2TJ104	1/4W 100K
R407	ERDS2TJ391	1/4W 390
R408	ERDS2TJ682T	1/4W 6.8K
R411	ERDS2TJ474	1/4W 470K
R412	ERDS2TJ472	1/4W 4.7K
R413	ERDS2TJ333	1/4W 33K
R501	ERDS2TJ822	1/4W 8.2K
R502	ERDS2TJ105T	1/4W 1M
R503	ERDS2TJ152	1/4W 1.5K
R504	ERDS2TJ472	1/4W 4.7K
R505	ERDS2TJ104	1/4W 100K
R507	ERDS2TJ391	1/4W 390
R508	ERDS2TJ682T	1/4W 6.8K
R511	ERDS2TJ474	1/4W 470K
R512	ERDS2TJ472	1/4W 4.7K
R513	ERDS2TJ333	1/4W 33K
R601, 602	ERDS2TJ471	1/4W 470
R603	ERDS2EJ121	1/4W 120
R701	ERDS2TJ472T	1/4W 4.7K
R702	ERDS2TJ103T	1/4W 10K
R705	ERDS2TJ103T	1/4W 10K
R706	ERDS2TJ823T	1/4W 82K
R707	ERDS2TJ123T	1/4W 12K
R708	ERDS2TJ683T	1/4W 68K
R710	ERDS2TJ333T	1/4W 33K
R711	ERDS2TJ105T	1/4W 1M
R712	ERDS2TJ102T	1/4W 1K
R713	ERDS2TJ102T	1/4W 1K
R715	ERDS2TJ222T	1/4W 2.2K
R716	ERDS2TJ102T	1/4W 1K
R717	ERDS2TJ104T	1/4W 100K
R720	ERDS2TJ120T	1/4W 12
R721	ERDS2TJ471T	1/4W 470
R722	ERDS2TJ222T	1/4W 2.2K
R723	ERDS2TJ682T	1/4W 6.8K
R725	ERDS2TJ103T	1/4W 10K
R726	ERDS2TJ562T	1/4W 5.6K
R727	ERDS2TJ332T	1/4W 3.3K

Ref. No.	Part No.	Values & Remarks
R728	ERDS2TJ682T	1/4W 6.8K
R732	ERDS2TJ562T	1/4W 5.6K
R733	ERDS2TJ473T	1/4W 4.7K
R735	ERDS2TJ392T	1/4W 3.9K
R736	ERDS2TJ472T	1/4W 4.7K
R737	ERDS2TJ102T	1/4W 1K
R738	ERDS2TJ104T	1/4W 100K
R740	ERDS2TJ471T	1/4W 470
R741	ERDS2TJ102T	1/4W 1K
R742	ERDS2TJ104T	1/4W 100K
R743	ERDS2TJ471T	1/4W 470
R745	ERDS2TJ470T	1/4W 47
R746	ERDS2TJ223T	1/4W 22K
R748	ERDS2TJ222T	1/4W 2.2K
R749	ERDS2TJ224T	1/4W 220K
R750	ERDS2TJ562T	1/4W 5.6K
R751	ERDS2TJ562T	1/4W 5.6K
R752	ERDS2TJ562T	1/4W 5.6K
R755	ERDS2TJ223T	1/4W 22K
R800-802	ERDS2TG103T	1/4W 10K
R803-805	ERDS2TG102T	1/4W 1K
R806	ERDS2TJ102	1/4W 1K
R807-809	ERDS2TG102T	1/4W 1K
R810-812	ERDS2TG122T	1/4W 1.2K
R813-815	ERDS2TG152T	1/4W 1.5K
R816-818	ERDS2TG222T	1/4W 2.2K
R819-821	ERDS2TG272T	1/4W 2.7K
R822-824	ERDS2TG392T	1/4W 3.9K
R825-827	ERDS2TG562T	1/4W 5.6K
R828-830	ERDS2TG103T	1/4W 10K
R831-833	ERDS2TG183T	1/4W 18K
R834	ERDS2TJ102	1/4W 1K
R835	ERDS2TJ274	1/4W 270K
R836, 837	ERDS2TG563T	1/4W 56K
R838-840	ERDS2TJ472	1/4W 4.7K
R841	ERDS2TJ223	1/4W 22K
R842	ERDS2TJ224T	1/4W 220K
R843	ERDS2TJ102	1/4W 1K
R844	ERDS2TJ106T	1/4W 10M
R845	ERDS2TJ105T	1/4W 1M
R846	ERDS2TJ183T	1/4W 18K
R847	ERDS2TJ563	1/4W 56K
R848	ERDS2TJ104	1/4W 100K
R849	ERDS2TJ823T	1/4W 82K
R850	ERDS2EJ121	1/4W 120
R851	ERDS2TJ223	1/4W 22K
R852	ERDS2TJ222	1/4W 2.2K
R853	ERDS2TJ563	1/4W 56K
R854	ERDS2TJ104	1/4W 100K
R855	ERDS2TJ151	1/4W 150
R856	ERDS2TJ181T	1/4W 180
R857	ERDS2TJ103	1/4W 10K

Ref. No.	Part No.	Values & Remarks
R859, 860	ERDS2TJ103	1/4W 10K
R861	ERDS2TJ222	1/4W 2.2K
R862	ERDS2TJ102	1/4W 1K
R863	ERDS2TJ103	1/4W 10K
R864	ERDS2TJ472	1/4W 4.7K
R865	ERDS2TJ152	1/4W 1.5K
R866	ERDS2TJ472	1/4W 4.7K
R867	ERDS2TJ183T	1/4W 18K
R868	ERDS2TJ103	1/4W 10K
R870	ERDS2TJ474	1/4W 470K
R871	ERDS2TJ103	1/4W 10K
R872, 873	ERDS2TJ472	1/4W 4.7K
R874	ERDS2TJ563	1/4W 56K
R875	ERDS2TJ104	1/4W 100K
R876	ERDS2TJ333	1/4W 33K
R877-880	ERDS2TJ104	1/4W 100K
R881	ERDS2TJ474	1/4W 470K
R882	ERDS2TJ823T	1/4W 82K
R883	ERDS2TJ271	1/4W 270
R884	ERDS2TJ474	1/4W 470K
R885-888	ERDS2TJ103	1/4W 10K
R891	ERDS2TJ474	1/4W 470K
R893-896	ERDS2TJ472	1/4W 4.7K
R897	ERDS2TJ104	1/4W 100K
R898	ERDS2TJ151	1/4W 150
		CAPACITORS
C1	ECBT1H180JC5	50V 18P
C2	ECBT1H102KB5	50V 1000P
C3	ECBT1H330J5	50V 33P
C4	ECBT1H102KB5	50V 1000P
C5	ECBT1C103MS5	16V 0.01U
C6, 7	ECBT1H181KB5	50V 180P
C8	ECBT1H102KB5	50V 1000P
C9	ECBT1H4R7KC5	50V 4.7P
C10	ECBT1H2R2KC5	50V 2.2P
C11, 12	ECBT1H102KB5	50V 1000P
C14, 15	ECBT1H102KB5	50V 1000P
C18	ECBT1H150JC5	50V 15P
C19	ECBT1H100JC5	50V 10P
C20	ECFR1C473MR	16V 0.047U
C23	ECEA1HN010	50V 1U
C24	ECBT1C103MS5	16V 0.01U
C25	ECFR1C223MR	16V 0.022U
C26	ECEA1CU101	16V 100U
C27	ECBT1C103MS5	16V 0.01U
C29	ECEA1HU010	50V 1U
C30	ECBT1H270J5	50V 27P
C31	ECEA1AU470	10V 47U
C32	ECFR1C223MR	16V 0.022U
C33, 34	ECEA1CU100	16V 10U

Ref. No.	Part No.	Values & Remarks
C35	ECFR1C223MR	16V 0.022U
C36	ECBT1H331KB5	50V 330P
C37	ECFR1C683MR	16V 0.068U
C38, 39	ECFR1C823MR	16V 0.082U
C40, 41	ECFR1C123MR	16V 0.012U
C44	ECBT1H330J5	50V 33P
C45	ECFR1C223MR	16V 0.022U
C46	ECEA0JU101B	6.3V 100U
C47	ECFR1C223MR	16V 0.022U
C48	ECEA1CU100	16V 10U
C49	ECBT1H270J5	50V 27P
C50	ECBT1H300J5	50V 30P
C51	ECBT1H102KB5	50V 1000P
C52	ECEA1EU3R3	25V 3.3U
C53	ECEA1HU010	50V 1U
C62	ECFR1C103MR	16V 0.01U
C63	ECBT1H150JC5	50V 15P
C64, 65	ECFR1C223MR	16V 0.022U
C66	ECBT1H102KB5	50V 1000P
C67	ECBT1H471KB5	50V 470P
C69	ECBT1C332MR5	16V 3300P
C71	ECBT1H102KB5	50V 1000P
C72	ECBT1H331KB5	50V 330P
C73	ECFR1C223MR	16V 0.022U
C74	ECBT1H470J5	50V 47P
C78	ECBT1H331KB5	50V 330P
C82	ECBT1C103MS5	16V 0.01U
C101	ECBT0J183MS5	6.3V 0.018U
C102	ECBT1H471KB5	50V 470P
C103	ECBT1H101KB5	50V 100P
C104	ECEA1CK100B	16V 10U
C105	ECBT1H151KB5	50V 150P
C106	ECEA1HK010B	50V 1U
C107	ECBT1H471KB5	50V 470P
C108	ECBT1C122KR5	16V 1200P
C109	ECEA1EK4R7	25V 4.7U
C110	ECEA50M1RB	50V 1U
C111	ECBT1H101KB5	50V 100P
C112	ECEA1AU101	10V 100U
C113	ECFR1C333JR	16V 0.033U
C114	ECBT1H561KB5	50V 560P
C115	ECEA1HK010B	50V 1U
C116, 117	ECEA1AU101	10V 100U
C118	ECEA1AU222E	10V 2200U
C119	ECEA1HK010B	50V 1U
C120	ECQM1H224JZ	50V 0.22U
C121, 122	ECBT1H471KB5	50V 470P
C138	ECEA1HK0R1	50V 0.1U
C155	ECEA1CK100B	16V 10U
C201	ECBT0J183MS5	6.3V 0.018U
C202	ECBT1H471KB5	50V 470P
C203	ECBT1H101KB5	50V 100P

Ref. No.	Part No.	Values & Remarks
C204	ECEA1CK100B	16V 10U
C205	ECBT1H151KB5	50V 150P
C206	ECEA1HK010B	50V 1U
C207	ECBT1H471KB5	50V 470P
C208	ECBT1C122KR5	16V 1200P
C209	ECEA1EK4R7	25V 4.7U
C210	ECEA50M1RB	50V 1U
C211	ECBT1H101KB5	50V 100P
C212	ECEA1AU101	10V 100U
C213	ECFR1C333JR	16V 0.033U
C214	ECBT1H561KB5	50V 560P
C215	ECEA1HK010B	50V 1U
C216, 217	ECEA1AU101	10V 100U
C218	ECEA1AU222E	10V 2200U
C219	ECEA1HK010B	50V 1U
C220	ECQM1H224JZ	50V 0.22U
C221, 222	ECBT1H471KB5	50V 470P
C238	ECEA1HK0R1	50V 0.1U
C255	ECEA1CK100B	16V 10U
C301	ECQV1H474JZ3	50V 0.47U
C303	ECQP2A392JZT	100V 3900P
C304	ECQP2A153JZT	100V 0.015U
C305	ECBT1C103MS5	16V 0.01U
C306	ECEA1HK010B	50V 1U
C307	ECEA1AU101	10V 100U
C308	ECQV1H473JZ3	50V 0.047U
C309	ECBT1C332MR5	16V 3300P
C310	ECBT1C472MR5	16V 4700P
C311	ECBT1C332MR5	16V 3300P
C313, 314	ECFR1C103KR	16V 0.01U
C316	ECEA1CU101	16V 100U
C317	ECEA1CK100B	16V 10U
C318	ECEA1AU101	10V 100U
C320	ECEA1EK4R7	25V 4.7U
C321-323	ECBT1H471KB5	50V 470P
C324	ECEA1AU101	10V 100U
C325	ECEA1AU470	10V 47U
C328	ECBT1H102KB5	50V 1000P
C329	ECBT1C472MR5	16V 4700P
C330	ECEA1HK2R2B	50V 2.2U
C331	ECEA1CK100B	16V 10U
C333	ECEA1CK100B	16V 10U
C334	ECEA1EU101	25V 100U
C335	ECEA1AU471	10V 470U
C336	ECEA1CK100B	16V 10U
C337	ECEA1EU472	25V 4700U
C338	ECEA0JU471	6.3V 470U
C341	ECEA1AU221	10V 220U
C343	ECEA1AU470	10V 47U
C346	ECEA1HK2R2B	50V 2.2U
C348	ECEA1CK100B	16V 10U
C349	ECQP2A562JZT	5600P

Ref. No.	Part No.	Values & Remarks
C350	ECBT1C103MS5	16V 0.01U
C352	ECEA1AU101	10V 100U
C353, 354	ECEA1HK010B	50V 1U
C355	ECBT1H101KB5	50V 100P
C356	ECBT1H100JC5	50V 10P
C360	ECBT1H102KB5	50V 1000P
C361	ECBT1H471KB5	50V 470P
C380	ECEA1HK0R1	50V 0.1U
C401, 402	ECEA1HK010B	50V 1U
C403	ECBT1H101KB5	50V 100P
C404	ECEA1HK010B	50V 1U
C405	ECFR1C103MR	16V 0.01U
C406	ECEA1HKR22B	50V 0.22U
C407	ECEA1HK010B	50V 1U
C408	ECFR1C104MR	16V 0.1U
C409	ECEA1HK010B	50V 1U
C410	ECBT1C103MS5	16V 0.01U
C411	ECBT1H102KB5	50V 1000P
C412	ECFR1C683KR	16V 0.068U
C501, 502	ECEA1HK010B	50V 1U
C503	ECBT1H101KB5	50V 100P
C504	ECEA1HK010B	50V 1U
C505	ECFR1C103MR	16V 0.01U
C506	ECEA1HKR22B	50V 0.22U
C507	ECEA1HK010B	50V 1U
C508	ECFR1C104MR	16V 0.1U
C509	ECEA1HK010B	50V 1U
C510	ECBT1C103MS5	16V 0.01U
C511	ECBT1H102KB5	50V 1000P
C512	ECFR1C683KR	16V 0.068U
C601	ECEA1AU221	10V 220U
C602, 603	ECEA1AK101	10V 100U
C701	ECEA0JU471B	6.3V 470U
C702	ECEA1AU221BG	10V 220U
C703	ECFR1C104MR	16V 0.1U
C704	ECFR1C104MR	16V 0.1U
C705	ECEA1CN100SB	16V 10U
C706	ECFR1C104MR	16V 0.1U
C707	ECEA0JU101B	6.3V 100U
C708	ECBA1H681KB5	50V 680P
C710	ECEA1HU010BG	50V 1U
C711	ECBT1H390J5	50V 39P
C712	ECEA1HU010BG	50V 1U
C713	ECEA1HN010SB	50V 1U
C715	ECFR1C333KR	16V 0.033U
C716	ECEA1HN010SB	50V 1U
C717	ECFR1C333KR	16V 0.033U
C718	ECBT1H102KB5	50V 1000U
C720	ECEA1HNR47SB	50V 0.47U
C721	ECFR1C683MR	16V 0.068U
C722	ECEA1HNR47SB	50V 0.47U
C723	ECEA1AN220SB	10V 22U

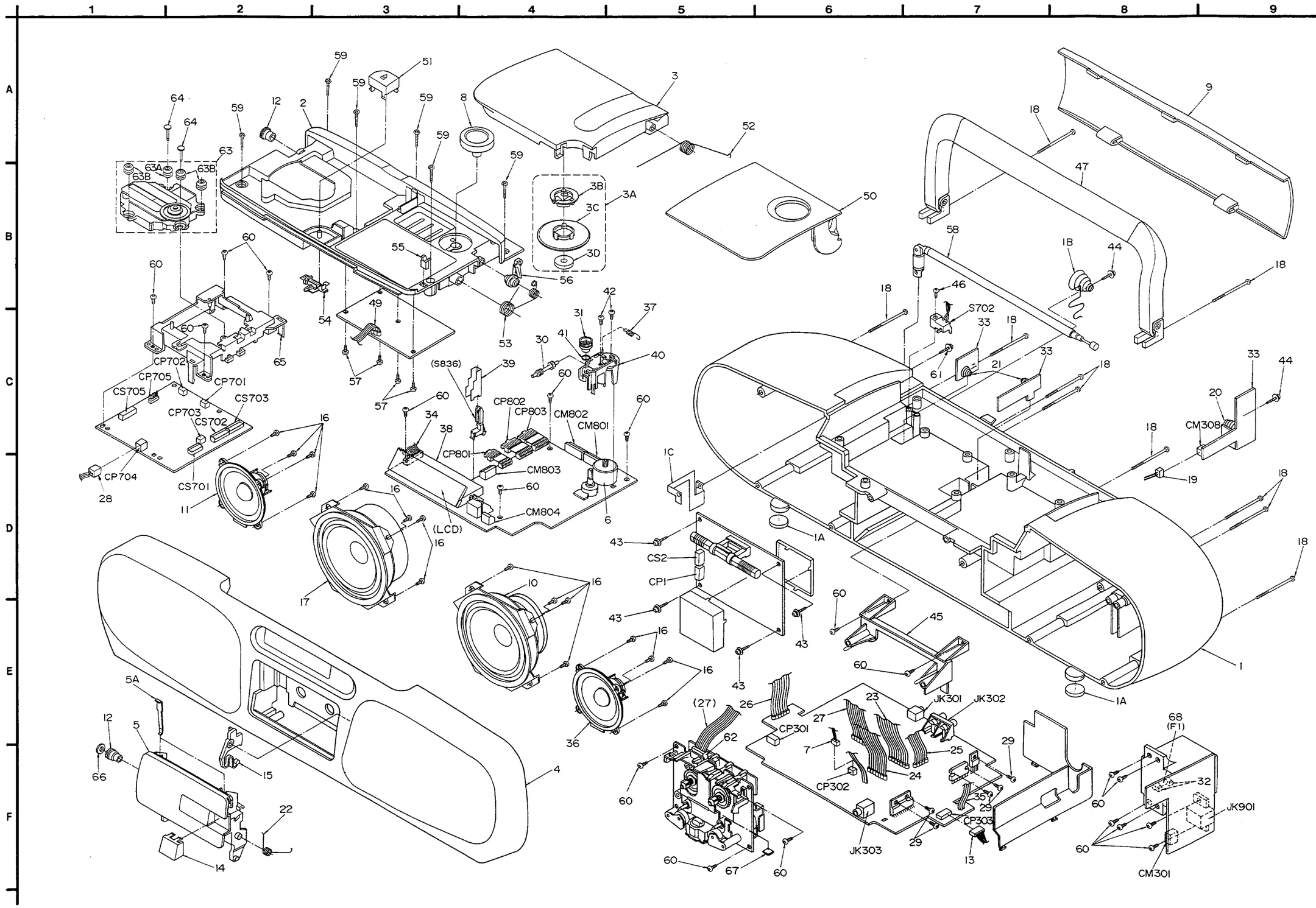
Ref. No.	Part No.	Values & Remarks
C725	ECFR1C104MR	16V 0.1U
C726	ECQV1H334JZ3	50V 0.33U
C727	ECQV1H474JZ3	50V 0.47U
C728	ECEA1CU220BG	16V 22U
C730	ECEA1CU220BG	16V 22U
C733	ECBT1H270J5	50V 27P
C735	ECBT1H270J5	50V 27P
C736	ECBT1H104ZF5	50V 0.1U
C737	ECEA0JU471B	6.3V 470U
C738	ECEA1CU100BG	16V 10U
C741	ECBT1C103MR5	16V 0.01U
C742	ECEA0JU101B	6.3V 100U
C743	ECBT1H104ZF5	50V 0.1U
C747	ECBT1C332MR5	16V 3300P
C748	ECFR1C333KR	16V 0.033U
C750	ECEA0JU101B	6.3V 100U
C751	ECFR1C333KR	16V 0.033U
C752	ECEA1HUR33B	50V 0.33U
C753	ECEA1HPS010B	50V 1U
C755	ECEA1HPS010B	50V 1U
C756	ECBT1C332MR5	16V 3300P
C757	ECEA1CU100BG	16V 10U
C758	ECFR1C104MR	16V 0.1U
C760	ECFR1C104MR	16V 0.1U
C761	ECEA0JU471B	6.3V 470U
C762	ECBT1H471KB5	50V 470P
C763	ECBT1H471KB5	50V 470P
C680-683	ECBT1H104ZF5	50V 0.1U
C800-802	ECBA1H681KB5	50V 680P
C803	ECBT1H102KB5	50V 1000P
C804	ECEA0JK221B	6.3V 220U
C805	ECBT1H102KB5	50V 1000P
C806	ECEA0JU331	6.3V 330U
C807	ECBT1H150JC5	50V 15P
C808	ECBT1H220JC5	50V 22P
C809, 810	ECBT1H300J5	50V 30P
C811, 812	ECBT1C103MS5	16V 0.01U
C814	ECBT1H331KB5	50V 330P
C815	ECEA0JU221	6.3V 220U
C816	ECBA1H681KB5	50V 680P
C817	ECBT1H101KB5	50V 100P
C818	ECEA0JK470	6.3V 47U
C819	ECEA1HK010B	50V 1U
C820	ECBA1H681KB5	50V 680P
C821	ECEA1CK100B	16V 10U
C822	ECBT1H180JC5	50V 18P
C823	ECEA1AK101	10V 100U
C824	ECBT1H180JC5	50V 18P
C825	ECEA1HKR33	50V 0.33U
C826	ECFR1C104MR	16V 0.1U
C828	ECEA1AK330B	10V 33U
C830	ECBT1H101KB5	50V 100P

Ref. No.	Part No.	Values & Remarks
C831-833	ECBT0J223NS5	6.3V 0.022U
C835	ECBT0J223NS5	6.3V 0.022U
C836, 837	ECBT1C103MS5	16V 0.01U
C840, 841	ECBT1H331KB5	50V 330P
C842-844	ECBT1H101KB5	50V 100P
C845	ECBA1H681KB5	50V 680P
C846	ECBT1H101KB5	50V 100P

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS	
1	RFKHXDS45EG	REAR CABINET ASS'Y	(EG)
1	RFKHXDS45EB	REAR CABINET ASS'Y	(EB)
1A	RHG1220ZA	RUBBER	
1B	RJC936ZB	TERMINAL, BATTERY	
1C	RJR0058	TERMINAL, ANTENNA	
2	RFKKXDS45EG	TOP CABINET ASS'Y	
3	RFKLXDS45EGA	CD COVER ASS'Y	
3A	RYF0066	DISC HOLDER ASS'Y	
3B	RMQ0152	HOLDER	
3C	RFKNXDS55N-K	DISC HOLDER	
3D	RHM245ZA	MAGNET	
4	RFKGXDS45EG	FRONT CABINET ASS'Y	
5	RFKLXDS45BK	CASSETTE LID ASS'Y	
5A	RUS757ZA	SPRING	
6	RFM156ZA	MOTOR ASS'Y	
7	REX0031-1	WIRE ASS'Y	
8	RGW0088-K	KNOB, VOLUME	
9	RKK0023-K	BATTERY COVER	
10	EAS10P486B	SPEAKER	
11	RFKAXDS45EGA	SPEAKER ASS'Y(L)	
12	RDG5782ZB	GEAR	
13	REX0312Y	WIRE ASS'Y	
14	RGU0407-K	BUTTON, TAPE EJECT	
15	RMLO204	LEVER	
16	XTB3+10G	SCREW	
17	EAS10P486C	SPEAKER	
18	XTV3+60G	SCREW	
19	REX9156-1	WIRE ASS'Y	
20	RJC511ZB	BATT. SPRING(DT1)	
21	RJC751ZA	BATT. SPRING(DT3)	
22	RUW170ZB	SPRING	
23	RWJ1110250QQ	FALT CABLE(W301)	
24	RWJ1111250QQ	FALT CABLE(W302)	
25	RWJ1107210QQ	FALT CABLE(W303)	
26	RWJ1107250RR	FALT CABLE(W304)	
27	RWJ1110230QQ	FALT CABLE(W305)	
28	REX0313Y	WIRE ASS'Y	
29	XTV3+10F	SCREW	
30	RDG5953ZC	GEAR	
31	RDG5954ZA	GEAR	
32 ⚠	EYF52BC	FUSE HOLDER(FH650, 651)	
33	RJB0428C-3	P. C. B.	
34	REX0032Y	WIRE ASS'Y(CW801)	
35	REX9157-1	WIRE ASS'Y(W301)	
36	RFKAXDS45EGB	SPEAKER ASS'Y(R)	
37	RMB0017-1	SPRING	
38	RMN0081	LCD HOLDER	
39	RMQ0189	COVER	
40	RUA867ZB	CHASSIS	

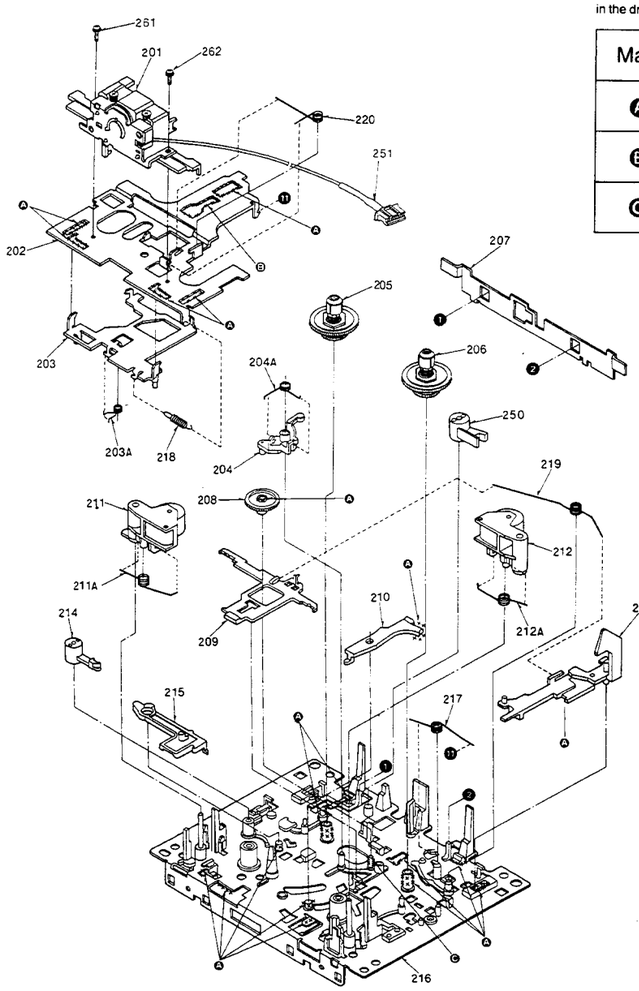
Ref. No.	Part No.	Part Name & Description	Remarks
41	RUD129XA	SPRING	
42	XQN17+C33	SCREW	
43	RHD30006	SCREW	
44	RHD30014	SCREW	
45	RMK0101	CHASSIS	
46	XTNR2+6CFN	SCREW	
47	RYH0004-K	HANDLE ASS'Y	
49	RWJ1105100QQ	FLAT CABLE	
50	RGD0009-K	COVER	
51	RGU0406-K	BUTTON, CD EJECT	
52	RME0025-2	SPRING	
53	RME0054	SPRING	
54	RML0114	LEVER	
55	RMR0324	STOPPER	
56	RMR0347	CAM	
57	XTV3+10G	SCREW	
58	XEARR225CA-Y	TELESCOPIC ANTENNA	
59	XTN3+12GFZ	SCREW	
60	XTV3+12G	SCREW	
61	XYN3+F12FY	SCREW	
62	RJS10T7ZA	SOCKET	
63	SOD0101-3Z	TRAVERSE UNIT	
63A	SHGD112	RUBBER(A)	
63B	SHGD113-1	RUBBER(B)	
64	RHM281YA	SPACER	
65	RMK0051	CHASSIS	
66	RMR0037	SLIDER WASHER	
67	RMX0052	RUBBER	
68 ⚠	XBA2C31TB0U	FUSE (F1)	
		PACKING MATERIALS	
P1	RPK0231	GIFT BOX	
P2	RPN0378	PAD	
P3	RPH653ZA	SHEET	
		ACCESORIES	
A1	RAK-RX308W	REMOTE CONTROLLER	
A1A	RKK0020-H	BATTERTY COVER	
A2	RFKSXDS45EG	INSTRUCTION MANUAL	(EG)
A2	RQT0854-G	INSTRUCTION MANUAL	(EB)
A3 ⚠	SFDAC05E03	POWER CORD, AC	(EG)
A3 ⚠	SJA193	POWER CORD, AC	(EB)

■ CABINET PARTS LOCATION



■ MECHANISM PARTS LOCATION

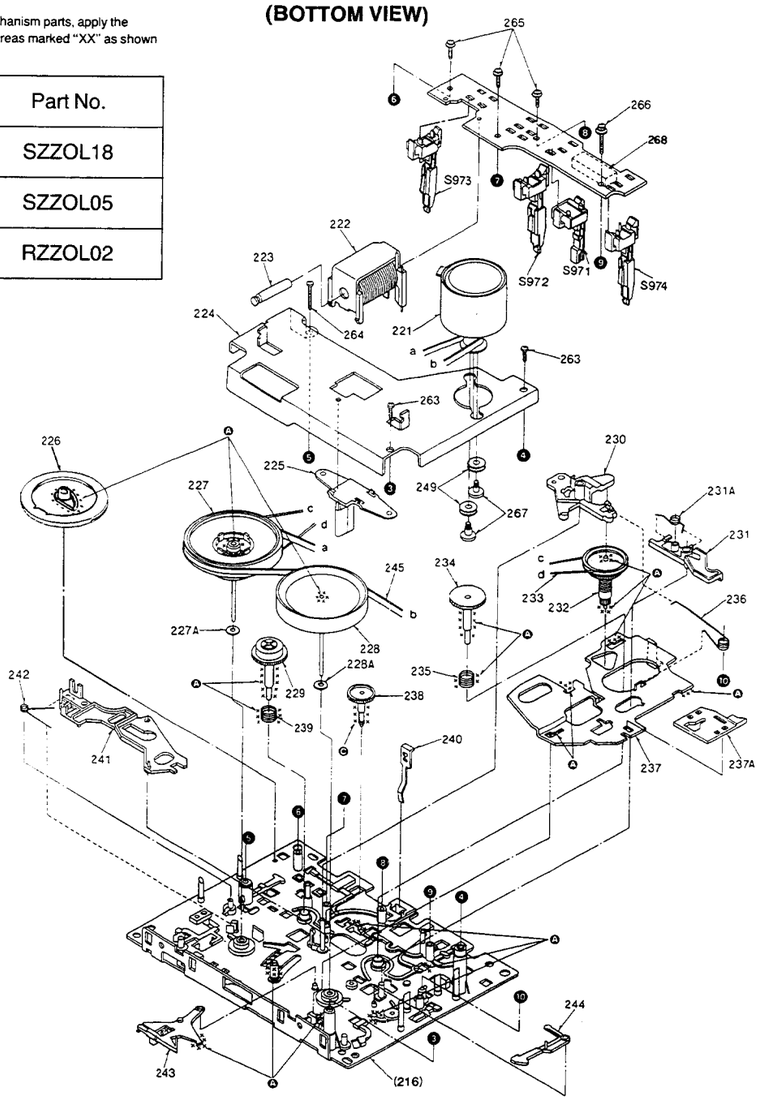
(TOP VIEW)



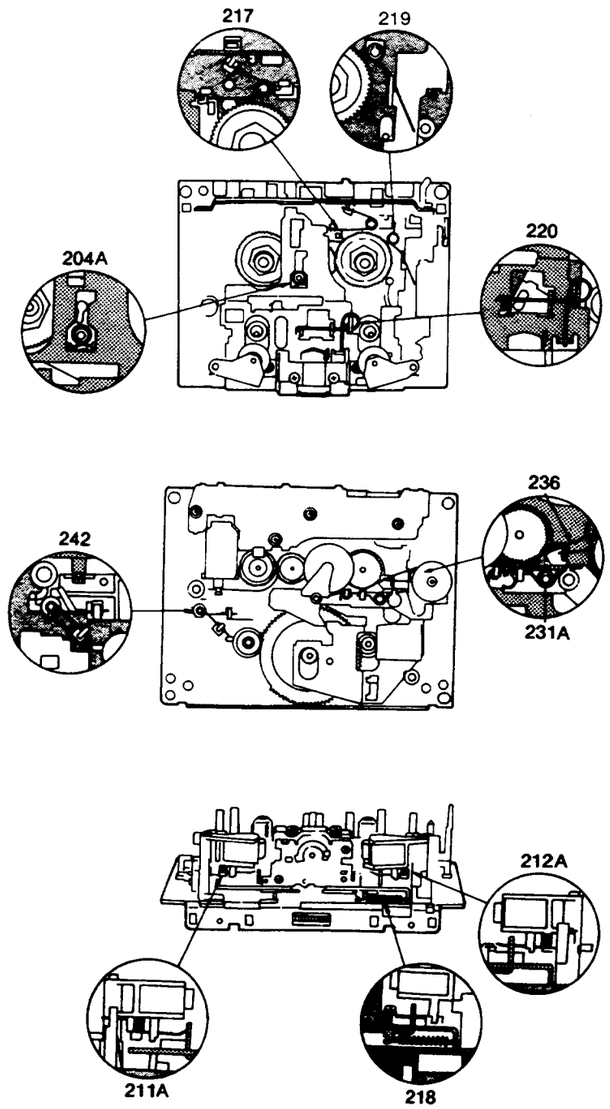
Note:
When changing mechanism parts, apply the specified grease to areas marked "XX" as shown in the drawing.

Mark	Part No.
Ⓐ	SZZOL18
Ⓑ	SZZOL05
Ⓒ	RZZOL02

(BOTTOM VIEW)

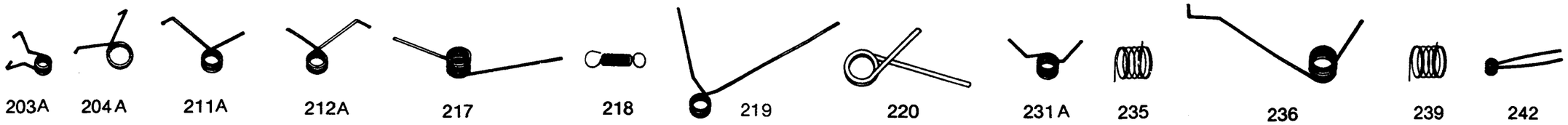


■ SPRING LOCATION



■ SPRING ILLUSTRATION

The spring illustration used shows the actual size so it can be used to check the shape of the spring.
(The illustration shows the spring separated from the mechanism.)



Ref. No.	Part No.	Part Name & Description	Remarks
		MECHANISM	
201	RXQ0007	HEAD ASS'Y	
202	RUA793ZF	CHASSIS	
203	RZLAR300A	LEVER ASS'Y	
203A	RUW143ZA	SPRING	
204	1UB0089Z	ARM	
204A	RUW148ZA	SPRING	
205	1DM0018ZB	REEL TABLE ASS'Y	
206	1DM0017ZB	REEL TABLE ASS'Y	
207	RML0069-1	LEVER	
208	RDG5772ZC	GEAR	
209	RUB508ZB	LEVER	
210	RUB506ZB	LEVER	
211	1UB0088ZB	PINCH ROLLER	
211A	RUW141ZA	SPRING	
212	1UB0087ZB	PINCH ROLLER	
212A	RUW140ZB	SPRING	
213	RUB507ZD	LEVER	
214	RNL1ZD	ARM	
215	RUB503ZD	LEVER	
216	RZUAR300A	CHASSIS ASS'Y	
217	RUW142ZA	SPRING	
218	RUD105ZA	SPRING	
219	RUW144ZA	SPRING	
220	RUW139ZA	SPRING	
221	RFM173ZA	MOTOR ASS'Y	
222	1UE0015ZB	PLUNGER	
223	RUB428ZE	SHAFT	
224	RUL1030YA	PLATE	
225	RMD5014ZC	SPACER	
226	RDG5927ZG	GEAR	
227	1DW0037ZB	FLYWHEEL ASS'Y	
227A	RNW139ZA	WASHER	
228	1DW0038ZB	FLYWHEEL ASS'Y	
228A	RUW141ZA	WASHER	
229	1DG0006ZB	GEAR ASS'Y	
230	RUB513ZD	LEVER	
231	1UB0091Z	LEVER	
231A	RUW146ZA	SPRING	
232	1DR0011ZB	PULLEY ASS'Y	
233	RDV90ZB	BELT	
234	RDG5769ZA	GEAR	
235	RUQ111ZB	SPRING	
236	RUW145ZA	SPRING	
237	1UB0090ZA	ROD	
237A	RUB512ZB	ROD	
238	RDG5773ZA	GEAR	
239	RUQ112ZA	SPRING	
240	RUS609ZC	SPRING	
241	RUB514ZC	LEVER	

Ref. No.	Part No.	Part Name & Description	Remarks
242	RUW147ZA	SPRING	
243	RUB515ZA	LEVER	
244	RUB509ZA	LEVER	
245	RDV100ZA	BELT	
249	RHG3032ZA	RUBBER	
250	RNL180ZB	LEVER	
251	REX0062	CABLE ASS'Y	
261	XTW2+6L	SCREW	
262	XTW2+8L	SCREW	
263	XTN26+7J	SCREW	
264	RHE5203ZA	SCREW	
265	XTW2+8S	SCREW	
266	XYC2+JF16	SCREW	
267	RHD26002	SCREW	

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Portable Stereo CD System

Radio Cassette

RX-DS45

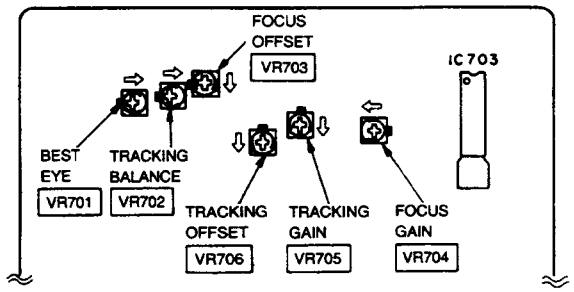
DEUTSCH

MESSUNGEN UND EINSTELLUNGEN

<CD-ABSCHNITT>

Vorsicht:
- Vermeiden Sie es, in den Laserstrahl zu blicken oder ihn zu berühren. (Laserstrahlen sind unsichtbar.) Bei eingeschaltetem CD-Spieler werden Laserstrahlen aus der Aufnahmelinse abgestrahlt. Vermeiden Sie direkte Aussetzung von Laserstrahlen, insbesondere während der Einstellarbeiten.

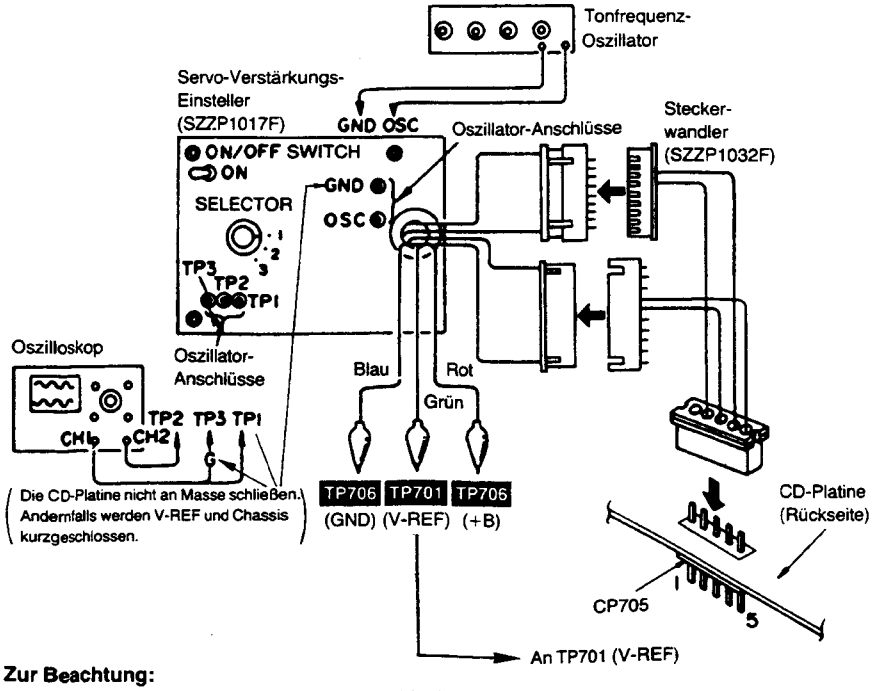
■ PROVISORISCHE POTENTIOMETER-EINSTELLUNG



- Ein Überdrehen des Potentiometers VR704 führt dazu, daß der Drehteller während der Justierung der Fokusverstärkung stoppt. In solch einem Fall das Potentiometer in Ausgangsstellung zurückdrehen und den Justiervorgang neu beginnen. Läßt sich die Ausgangsstellung nicht feststellen, einfach das Potentiometer langsam aus seiner Mittenstellung nach links oder rechts drehen (siehe Pfeile in der Abbildung); sobald der Plattenteller wieder dreht, den Justiervorgang fortsetzen.
- Nach einer vollen Umdrehung oder Austausch eines Potentiometers, dieses in Ausgangsstellung setzen. Läßt sich die Ausgangsstellung nicht feststellen, das Potentiometer in Mittenstellung bringen und den Justiervorgang fortsetzen.

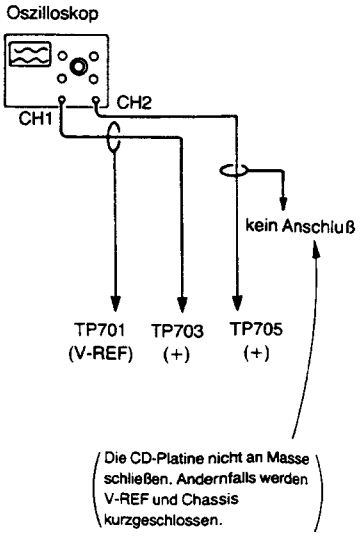
■ ANSCHLUSS DES SERVOVERSTÄRKUNGS-EINSTELLERS

(Justierung von Spurfolge-, Fokus- und Gleichlauf-Verstärkung)



■ ANSCHLUSS DES OSZILLOSKOPS

(Mechanische Einstellung und Augenmuster Einstellung, Fokusversatz und Spurfolgeversatz)



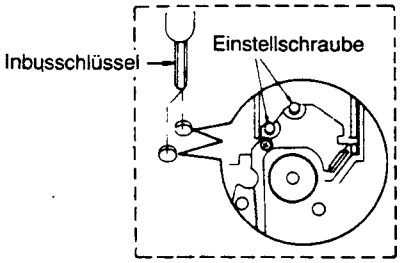
Zur Beachtung:
1. Die Testpunkte mit Leitungsdraht kurzschließen.
2. Nur V-REF (TP701) an Masse schließen, wenn Justierungen an der CD-Einheit erfolgen sollen.

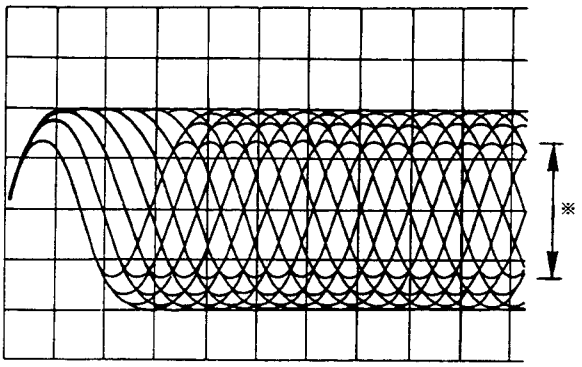
Meßgeräte und Sonderwerkzeug

- Servo-Verstärkungs-Einsteller (SZZP1017F oder SZZP1094C)
- Test-Discs
  1. Spiel-CD (SZZP1054C)
  2. Ungleichmäßige Test-CD (SZZP1056C)
  3. Schwarzstreifen-Test-CD (SZZP1057C)
- Normale CD
- Doppelstrahl-Oszilloskop mit 30 MHz Bandbreite oder höher (mit EXT-Trigger und 1:1-Sonde).
- Tonfrequenz-Oszillator (AF)
- Steckerwandler (SZZP1032F)
- Inbusschlüssel (M2,0)

(1) MECHANISCHE EINSTELLUNG

1. Die Sonde CH1 des Oszilloskops über TP703 (+) und TP701 (V-REF) an die Servo-Platine anschließen.
   Oszilloskopeinstellung:
   Spannung ..... 200 mV
   Wobbel ..... 0,5 µs
   Eingang ..... WS
2. Den CD-Spieler **einschalten** und Titelnr. **9** der Test-Disc (SZZP1056C) spielen.
3. Den auf Wiedergabe geschalteten CD-Spieler wie rechts gezeigt plazieren.
4. Mit dem 2,0-mm-Inbusschlüssel die beiden Einstellschrauben auf kleinstmögliche Amplitudenänderung einstellen.
5. Nach erfolgter Einstellung die Schrauben mit Farbe (RZZOL01) in Stellung sichern.

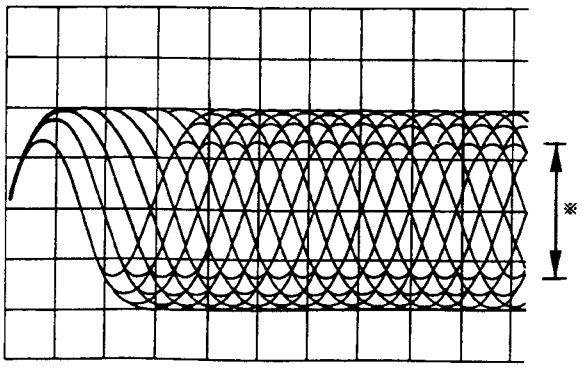




※Amplitudenänderung so klein wie möglich einstellen.

(2) AUGENMUSTER-EINSTELLUNG

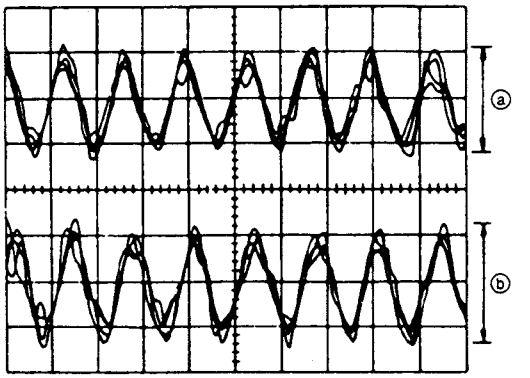
1. Die Sonde CH1 des Oszilloskops über TP703 (+) und TP701 (V-REF) an die Servo-Platine anschließen.
   Oszilloskopeinstellung:
   Spannung ..... 100 mV
   Wobbel ..... 0,5 µs
   Eingang ..... WS
2. Den CD-Spieler **einschalten** und die Test-Disc (SZZP1054C) spielen.
3. Das Potentiometer **VR701** auf größtmögliche HF-Signal-Augenmusteramplitude einstellen.



※Größtmögliche Amplitude einstellen.

(3) FOKUSVERSTÄRKUNGS-EINSTELLUNG

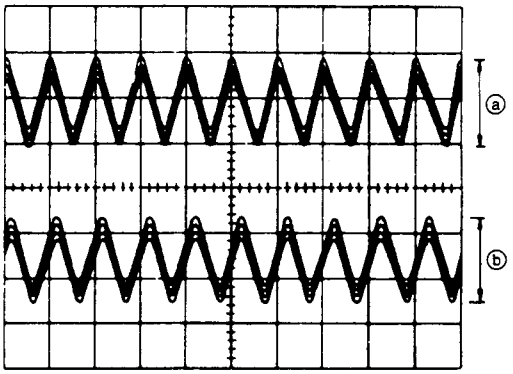
1. Den Servo-Verstärkungs-Einsteller an den CD-Spieler anschließen (siehe Seite 5).
2. Den Verstärkungsschalter des Servo-Verstärkungs-Einstellers auf **„3"** setzen und den ON/OFF-Schalter auf **ON**.
3. Den Tonfrequenz-Oszillatorausgang für **1 kHz, 150 mVs-s** einstellen und über die OSC- und GND-Klemmen an den Servo-Verstärkungs-Einsteller anschließen.
4. Die Sonden CH1 und CH2 des Oszilloskops and die Prüfpunkte TP1 und TP2 des Servo-Verstärkungs-Einstellers anschließen.
   Oszilloskopeinstellung:
   Spannung ..... 100 mV (beide Kanäle)
   Wobbel ..... 1 ms
   Eingang ..... WS
5. Die Test-Disc (SZZP1014F oder SZZP1054C) spielen.
6. Den Verstärkungsschalter des Servo-Verstärkungs-Einstellers auf **„3"** setzen, um ein 1-kHz-Signal auf das Oszilloskop zu legen. Mit dem Potentiometer **VR704** die Signalamplituden der beiden Kanäle gleichgroß machen.
7. Den Verstärkungsschalter des Servo-Verstärkungs-Einstellers zurück auf **„2"** setzen.



*Mit **VR704** die Amplituden ⓐ und ⓑ gleichgroß machen.

(4) EINSTELLUNG DER SPURFOLGE-VERSTÄRKUNG

1. Den Tonfrequenz-Oszillatorausgang für **1 kHz, 150 mVs-s** einstellen und über die OSC- und GND-Klemmen an den Servo-Verstärkungs-Einsteller anschließen.
2. Die Sonden CH1 und CH2 des Oszilloskops and die Prüfpunkte TP1 und TP2 des Servo-Verstärkungs-Einstellers anschließen.
   Oszilloskopeinstellung:
   Spannung ..... 100 mV (beide Kanäle)
   Wobbel ..... 1 ms
   Eingang ..... WS
3. Den CD-Spieler **einschalten** und die Test-Disc (SZZP1014F oder SZZP1054C) spielen.
4. Den Verstärkungsschalter des Servo-Verstärkungs-Einstellers auf **„1"** setzen, um ein 1-kHz-Signal auf das Oszilloskop zu legen. Mit dem Potentiometer **VR705** die Signalamplituden der beiden Kanäle gleichgroß machen.
5. Den Verstärkungsschalter des Servo-Verstärkungs-Einstellers zurück auf **„2"** setzen.

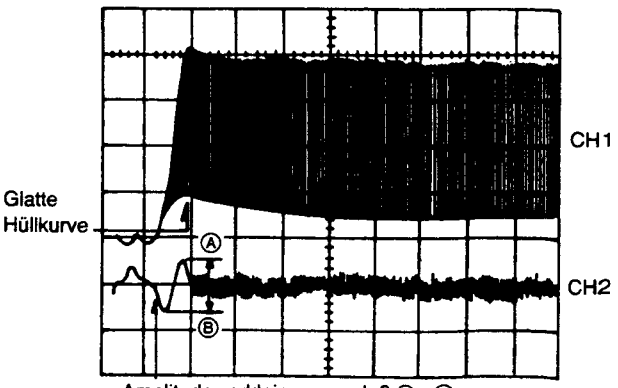


*Mit **VR705** die Amplituden ⓐ und ⓑ gleichgroß machen.

(5) FOKUSVERSATZ-EINSTELLUNG

Hinweis: Sicherstellen, daß der Verstärkungsschalter des Servo-Verstärkungs-Einstellers auf **„2"** gesetzt ist.

1. Die Sonde CH1 des Oszilloskops über TP703 (+) und TP701 (V-REF) der Servo-Platine und die Sonde CH2 über TP705 (+) und TP701 (V-REF) anschließen.
   Oszilloskopeinstellung:
   Spannung ..... 200 mV (CH1)
   1 V (CH2)
   Wobbel ..... 1 ms
   Eingang ..... WS (CH1 und CH2)
   Triggermodus ..... Normal (Trigger CH1)
2. Den CD-Spieler **einschalten** und Titelnr. **9** der Test-Disc (SZZP1057C) spielen.
3. CH1 des Oszilloskops triggern, um die gezeigten Wellenformen zu erhalten. Mit **VR703** dafür sorgen, daß die Flanke der HF-Signal-Hüllkurve auf CH1 glatt und die Signalamplitude auf CH2 so klein wie möglich ist; Amplitude Ⓐ=Ⓑ.

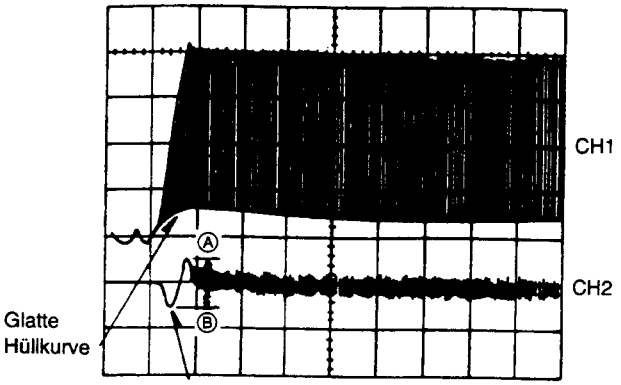


Amplitude verkleinern, so daß Ⓐ=Ⓑ.

(6) EINSTELLUNG DES SPURFOLGE-VERSATZES

Hinweis: Sicherstellen, daß der Verstärkungsschalter des Servo-Verstärkungs-Einstellers auf **„2"** gesetzt ist.

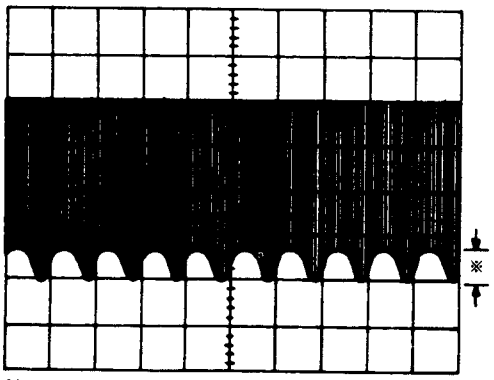
1. Die Sonde CH1 des Oszilloskops über TP703 (+) und TP701 (V-REF) der Servo-Platine und die Sonde CH2 über TP704 (+) und TP701 (V-REF) anschließen.
   Oszilloskopeinstellung:
   Spannung ..... 200 mV (CH1)
   1 V (CH2)
   Wobbel ..... 1 ms
   Eingang ..... WS (CH1 und CH2)
   Triggermodus ..... Normal (Trigger CH1)
2. Den CD-Spieler **einschalten** und Titelnr. **9** der Test-Disc (SZZP1057C) spielen.
3. CH1 des Oszilloskops triggern, um die gezeigten Wellenformen zu erhalten. Mit **VR706** dafür sorgen, daß die Flanke der HF-Signal-Hüllkurve auf CH1 glatt und die Signalamplitude auf CH2 so klein wie möglich ist; Amplitude Ⓐ=Ⓑ.



Amplitude verkleinern, so daß Ⓐ=Ⓑ.

(7) EINSTELLUNG DES SPURFOLGE-GLEICHGEWICHTS

1. Sicherstellen, daß der Verstärkungsschalter des Servo-Verstärkungs-Einstellers auf **„2"** gesetzt ist.
2. Den Tonfrequenz-Oszillatorausgang für **1 kHz, 150 mVs-s** einstellen und über die OSC- und GND-Klemmen an den Servo-Verstärkungs-Einsteller anschließen.
3. Die Sonde CH1 des Oszilloskops über TP703 (+) und TP701 (V-REF) der Servo-Platine und die Sonde CH2 (+) über die OSC-Klemme an den Servo-Verstärkungs-Einsteller anschließen.
   Oszilloskopeinstellung:
   Spannung ..... 100 mV (CH1)
   Wobbel ..... 1 ms
   Eingang ..... WS (CH1 und CH2)
   Triggermodus ..... Normal (Trigger CH2)
4. Den CD-Spieler **einschalten** und die Test-Disc (SZZP1014F oder SZZP1054C) spielen.
5. Das Potentiometer **VR702** so einstellen, daß der Ausgang der mit „※" markierten Wellenform ausgeglichen ist.
6. Die Leitungsdrähte des Servo-Verstärkungs-Einstellers vom CD-Spieler trennen.



Dieser Abschnitt der Wellenform muß im Gleichgewicht sein.

■ BETRIEBSPRÜFUNG NACH ERFOLGTER EINSTELLUNG

•Titel-Übersprung

1. Eine normale Musik-CD spielen.
2. Durch Betätigen der Titel-Übersprung-Tasten prüfen, ob der Suchlauf in Vor-und Rückwärtsrichtung einwandfrei arbeitet.

•Manueller Suchlauf

1. Eine normale Musik-CD spielen.
2. Durch Betätigen der Manual-Such-Tasten prüfen, ob der Suchlauf in mehrfacher Normalgeschwindigkeit (in Vor- und Rückwärtsrichtung) einwandfrei arbeitet.

•Spielen einer Test-Disc

1. Auf der Test-Disc (SZZP1054C) die Stelle mit dem 0,7-mm-Schwarzloch und der 0,7-mm-Kerbe spielen und sicherstellen, daß weder Tonausfall noch Störgeräusche auftreten.
2. Die mittleren Spuren der ungleichmäßigen Test-Disc spielen und sicherstellen, daß weder Tonausfall noch Störgeräusche auftreten.

■ JUSTIERPUNKTE

•Zur Lokalisierung der Testpunkte beziehen Sie sich bitte auf den Leiterplatten-Schaltplan.